THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—13TH YEAR. SYDNEY: SATURDAY, OCTOBER 2, 1926. No. 14.

Table of Contents

[The Whole of the Literary Matter in THE MEDICAL JOURNAL OF AUSTRALIA is Copyright.]

	PAGE.
ORIGINAL ARTICLES—	
"Facts and Fancies, Olfactory and Otherwise," by ERNEST CULPIN, M.B.	435
"Syphilis and Insanity," by S. EVAN JONES, M.B.	441
"The Differential Diagnosis of Cerebral Syphilis," by S. J. MINOGUE, M.B., Ch.M., Dip. Psychiatry	444
"Cisterna Magna Puncture," by J. F. MACKEDDIE, M.D.	447
"A New Method of Treatment of Chilblains," by LEONARD J. C. MITCHELL, M.D., B.S.	449
"Mendel and Genius," by G. H. TAYLOR, L.R.C.P., L.R.C.S.	450
REPORTS OF CASES—	
"Two Cases of Gonococcal Septicæmia," by A. H. TEBBUTT, D.S.O., V.D., B.A., M.B., D.P.H.	451
"Arterial Aneurysms," by ARCHIE ASPINALL, M.B., Ch.M.	452
REVIEWS—	
In Memory of Osler	453
Occlusion of the Mesenteric Vessels	453
Dental Research in the Australian Aboriginal	454
A Book for Mothers	454
LEADING ARTICLES—	
Industrial Hygiene	455
CURRENT COMMENT—	
The Kottmann Test in Thyreoid Dysfunction	456
Atrophic Rhinitis	457
ABSTRACTS FROM CURRENT MEDICAL LITERATURE—	
Surgery	458
BRITISH MEDICAL ASSOCIATION NEWS—	
Scientific	460
Medico-Political	460
MEDICAL SOCIETIES—	
Downs and South-Western Medical Association	463
PUBLIC HEALTH—	
The Control of Hydatid Disease	463
OBITUARY—	
Sydney Vere Appleyard	463
Joseph Ahearne	464
CONGRESS NOTES—	
The Australasian Medical Congress (British Medical Association)	464
Fishing Around Dunedin	465
CORRESPONDENCE—	
Sting Ray Injuries	465
A Chair of Preventive Medicine	466
NAVAL AND MILITARY—	
Appointments	466
POST-GRADUATE WORK—	
November Course in Melbourne	467
THE MEDICAL BENEVOLENT ASSOCIATION OF NEW SOUTH WALES	467
DIPLOMA IN TROPICAL MEDICINE	467
PROCEEDINGS OF THE AUSTRALIAN MEDICAL BOARDS—	
Victoria	467
Queensland	468
MEDICAL APPOINTMENTS	468
MEDICAL APPOINTMENTS VACANT, ETC.	468
MEDICAL APPOINTMENTS: IMPORTANT NOTICE	468
DIARY FOR THE MONTH	468
EDITORIAL NOTICES	468

FACTS AND FANCIES, OLFACTORY AND OTHERWISE.[1]

By ERNEST CULPIN, M.B. (Sydney),

Honorary Surgeon, Ear Nose and Throat Department, Brisbane Hospital, Queensland.

IT is a not unusual procedure when giving an address to our Branch to preface or conclude with an apology. I shall conform to this custom in offering an apology, but I offer that apology on behalf of your subcommittee which is responsible for the programme of papers presented to you during the year; on that committee alone rests the responsibility for my presence here and to a great extent for the subject of my address this evening. I am fully aware of my own inability to prepare a paper that may be of any use to you and I emphatically pointed this out when approached on the matter, consequently the responsibility is theirs and theirs alone.

As to the subject for consideration, I felt that I was in a somewhat peculiar position. I was requested to give a paper justifying intranasal surgery, the reason given being that some members of our profession in Brisbane are strongly condemning such procedures. To read a paper strictly on these lines, I think you will agree with me, would be to cast a slur on the intelligence of the members of our Branch, for I hope there are none amongst us who require to be convinced that intranasal surgery is a means of alleviating certain of the discomforts and sufferings of mankind. I may even go further and say that if a defence of intranasal surgery is required, it is equally or rather more desirable that our abdominal surgeons be put in the witness box to justify their frequent removal of normal appendices and the many other unsatisfactory results of their excursions within the peritoneal cavity.

I ask you, how would the gynæcologist fare in such a position? As for the physician, it makes one weep to think of the poor unfortunates, treated month after month and year after year, swallowing poisons and gastric irritants to cure a tuberculous lung which is nothing more nor less than one

[1] Read at a meeting of the Queensland Branch of the British Medical Association on June 4, 1926.

..ted by bronchiectasis, or pulmonary infection ..ue to disease in the nasal accessory sinuses.

Perhaps it is time to leave such recriminations, but I think you will realize my objection to such a title as the "Justification of Intranasal Surgery." It is to me a very difficult matter to present anything useful to you in your work, but during my few years' practice in the special subject I have perhaps developed some ideas of my own and have devoted some time to reading. As my thoughts in some respects are but nebulous and as I desire to wander in other regions than those of accessory sinuses, I have entitled my address "Facts and Fancies, Olfactory and Otherwise."

Anatomy and Physiology of the Nose and Accessory Sinuses.

In dealing with intranasal surgery it is essential first of all to have some knowledge of the anatomy and physiology of the nose and accessory sinuses and I will crave your pardon if I briefly refer to those subjects. You are all aware of course that the nasal cavity is divided into two more or less equal halves by the nasal septum and further that on each lateral wall of the nose are the three turbinate bones and three or more strictly speaking four meati of the nose. Now this is very elementary, but yet it is not uncommon for a patient to come along with the statement that "Dr. So and So says I have polypi in my nose," when examination reveals no abnormality beyond a more or less deflected septum and perhaps some congestion of turbinal mucosa. The turbinates are at times mistaken for polypi. The next point of the gross anatomy to be recognized is the accessory sinuses and of these to my mind the maxillary antra are the most important. The maxillary ostium is situated in the middle meatus beneath the middle turbinate adjacent to the opening of the nose frontal canal and the ostia of the anterior ethmoidal cells. The openings of the posterior ethmoidal cells are above and behind the middle turbinate and the sphenoid behind the posterior part of the middle turbinate. The situation of these ostia is of importance as an aid in locating the origin of pus and other nasal discharges. The blood supply is derived from both the internal and external carotid arteries. The important features of the venous circulation are its connexion with the intracranial veins and sinuses and the possibility of cavernous sinus infection from intranasal or sinus infection and also from superficial infections about the region of the nose.

The lymphatics also communicate with the subdural space by means of lymphatics surrounding the olfactory nerves and with the deep cervical glands by medium of the lymphatics of the pharynx.

Apart from the olfactory nerves the nerve supply is from the fifth nerve. Of special interest is the spheno-palatine or Meckel's ganglion or nasal ganglion consisting of an interlacement of nerve fibres in which are numerous sympathetic neurones. There is a sensory root—the spheno-palatine nerve from the maxillary nerve—the fibres being mostly dendrites of cells of the gasserian ganglion. The motor root is from the facial nerve and the sympathetic from the carotid plexus; the two fused form the Vidian nerve which joins the ganglion in the spheno-maxillary fossa. From the ganglion the various branches are supplied to nasal and accessory sinus mucosa, as well as the mucosa of palate, pharynx, tonsils and muscles of the palate. The anatomical feature of importance is the ganglion's close relationship to the sphenoid sinus and sometimes to the posterior ethmoidal cells; it is liable to be involved by disease in these sinuses.

The last anatomical feature I shall refer to, is the all important lining mucosa, a ciliated mucous membrane, continuously lining nasal and accessory sinus cavities which has the important function of warming and regulating to a certain extent the amount of moisture in the inspired air. It is estimated that the nasal and sinus mucosa excretes about a litre of water in twenty-four hours. By its mucous secretion microorganisms are entangled and by the action of the cilia driven towards the exterior, phagocytes also attack the enmeshed bacteria. The nasal mucosa thus has very important functions and it is necessary to remember this and avoid as far as possible destroying the nasal mucosa by surgery or by cauterization. When healthy, the sinuses are supposed to be practically sterile owing to the protective function of the mucosa lining the nasal septum, turbinates and meati. Consequently removal of this membrane, for example, in simple turbinectomy, lessens powers of resistance and may render sinus infection more likely to occur.

It is for this reason that submucous resection of the nasal septum is performed in preference to the sawing off of spurs or removal of turbinates to improve ventilation of the nose and accessory sinuses or to relieve pressure symptoms.

Submucous Resection of the Nasal Septum.

I now turn to the surgical side of the question which is in fact far too big a subject for such a brief paper as can be presented in one short evening and I can only very briefly review the subject.

I will begin with the operation of submucous resection of the nasal septum which is one of the most common and satisfactory of surgical procedures.

What are the indications for this operation? Firstly we have simple nasal obstruction which may merely cause discomfort. As an example of this I will quote myself.

For years when retiring to rest I spent twenty to thirty minutes or more almost every night in forcible nasal breathing, as one or both sides of the nose was or were blocked by swollen mucosa, probably of inferior turbinates and the discomfort was indeed very great. Five years ago I underwent the operation and I do not think I have once had the slightest trouble with nasal respiration since and the relief has given me many more hours sleep; in fact I used to dread going to bed at times. Furthermore, I authoritatively state that the operation is no ordeal, although there are some hours of discomfort until the hæmostatic packing is removed.

Occasionally one meets with such a badly obstructed nose that thorough cocainization is difficult and the operation itself may be very difficult, but that is very occasional and with care no submucous resection of the nasal septum should be a trial to the patient. If such a thing were necessary and possible I would unhesitatingly undergo the operation every three months to obtain the relief which has been given to me.

I will instance another case.

A youth of fifteen whose parents were disturbed on account of his slow growth and *laissez faire* outlook on life, submitted to a submucous resection of his nasal septum which was badly deflected, he grew rapidly both physically and mentally.

Recurrent colds in the head are frequently due to even slight septal deflections, contact of two mucosal surfaces appears to cause swelling of mucosa and irritation with mucous secretion, often going on to sinus infection; repeated headaches are due probably to slight involvement of frontal and ethmoidal sinuses, which are relieved by the proper ventilation of the sinuses consequent upon a successful septum operation.

This is seen in the case of Mrs. M.L., aged thirty-three years, who suffered from "terrible pains in the head and occasional earache, also difficulty in breathing through the nose." She now states that her head is "very much better" and her breathing is "quite all right."

Mrs. A.W., aged forty-six years, complained of "sneezing a lot and a drip at the back of the nose." She was deaf at times and sometimes had tinnitus; now she is not troubled with sneezing, though she still has some noises.

Mr. A.S., aged thirty-two years, had persistent cough, not in chest; submucous resection of septum was followed by relief from cough.

Mr. J.M.L., aged twenty-four years, complained of headache across the eyes and of colds as long as could be remembered; he was somewhat deaf. After submucous resection of the nasal septum he says that the headache is better, his nose is clearer and his hearing good.

I will mention only the occasional necessity for submucous resection of the nasal septum in order to get to other regions.

I have once or twice been disappointed in the results as to free nasal breathing after an apparently good operation and found it to be due to a general apparent hyperplasia of the nasal mucosa which is thick and congested with no evidence of sinus infection; this condition I have noticed only in young virile men and I regard it as having a relationship to endocrine activity.

Turbinotomy.

It is stated that sometimes the septum operation may be avoided by partial turbinotomy. I think the principle is wrong, unless the operation is performed submucously, for no healthy mucosa should be sacrificed. For years we have been taught to respect the inferior turbinates and I think we should show equal respect to the middle turbinates. Turbinal hypertrophy will necessarily cause similar symptoms to those of septal obstruction and needs no further reference here.

One aspect of turbinotomy is seen in young children with recurrent attacks of what is called bronchitis, but is really a bronchio-spasm or asthmatic condition, due to nasal obstruction, that can be relieved by partial mid-turbinotomy at the time the adenoids are removed. If the actual nasal condition is allowed to persist, the symptoms will be unrelieved and the adenoids recur.

Nasal Polypi.

Our next consideration will be nasal polypi. Few will object to their removal, but I have arrived at the conclusion that when nasal polypi are present, it is very unusual for them to be merely polypi developed from the mucosa, for example, of the middle turbinate, in an otherwise healthy nose. I do not go so far as to say that such do not occur, but I look upon nasal polypi as a result of and an evidence of sinus disease. I used to be under the impression that nasal polypi were due to disease in the underlying bone; I now consider the polypi and any disorder of the underlying bone as being due to infection of accessory sinus mucosa (I am for the time excluding malignant disease).

In view of my remarks you will therefore understand why I dismiss the subject of the surgical removal of nasal polypi and proceed to the all important subject of nasal accessory sinus infection.

Nasal Accessory Sinus Infection.

Nasal accessory sinus infection in itself is a subject of enormous importance and not unassociated with difficulty.

Acute Sinus Infections.

Acute sinus infections I will deal with but briefly. They may be mild and are frequently overlooked, being regarded as a simple cold in the head. This is of course not far from the truth and such infections are not often indications for surgical treatment. They yield to medicated vapour inhalations, my favourite prescription consisting of menthol, *tinctura benzoini composita, oleum eucalypti* and *oleum pini*; the inhalations should be frequently repeated. They are soothing and relieve congestion and aid drainage and are perhaps antiseptic.

The severe forms frequently require conservative operations to provide drainage, as the natural ostia are obstructed by the swollen mucosa and unless drainage and ventilation are secured, the condition may easily become chronic. In addition to the coryza present, the feeling of malaise and elevated temperature, there is usually more or less severe pain in and actual tenderness of the sinuses affected. The pain is frequently mistaken for neuralgia; the pain of frontal and maxillary sinuses is as a rule fairly definitely localized. Anterior ethmoidal pain is felt about the root of nose and inner parts of the orbits; posterior ethmoidal and sphenoidal pain is commonly referred to the back of the head or perhaps the vertex. Frontal tenderness is elicited by upward pressure on the floor of the sinus where the bone is thin usually, in the region of the pulley of the internal oblique, Ewing's point. This tenderness is very definite when pre-

sent and but little pressure is required for its elicitation. Even in healthy frontal sinuses very firm pressure will cause tenderness, but the tenderness of frontal suppuration is very definite and is frequently present when pain itself is absent. If frontal pain persists, it is undoubtedly wise to drain the sinus, as intracranial complications thereof are serious and the intranasal operation is comparatively simple. I think, however, that an X ray photograph should be taken in every case if possible, to ascertain the size of the sinus which may actually be absent, the symptoms being due to ethmoiditis or even antral infection. The absence of discharge or pus from the nasal fossæ is no contradiction to the presence of pus in the sinuses, but when the ostia are occluded by swollen mucosa the mucous membrane in the neighbourhood is seen to be swollen, often pale, sometimes red, moist and evidently pathological. In addition to the drainage of these sinuses medicated inhalations are of great use.

Chronic Sinus Suppuration.

Chronic sinus suppuration is one of the commonest afflictions of mankind and is responsible for a very great economic loss to the community as a whole, for many deaths and much individual misery and suffering.

The effects of chronic sinus suppuration are threefold. The first group of effects comprises local, nasal obstruction due to swelling of mucosa and presence of discharge, aching pains, offensive odour noticed by the patient whose complaint is frequently that he is always getting colds in the head.

Six years ago I removed adenoids from a boy of ten years who evidently had nasal obstruction. About eighteen months ago he was sent back to me on account of bad adenoids which he certainly had. I examined him and found large tonsils, a badly deflected septum, large septic adenoids and symptoms of right antral suppuration. I performed three successive operations, the radical operation on the antrum, removal of tonsils and submucous resection of the nasal septum. On May 24, 1926, the boy's mother told me that the change in him is remarkable and strange to relate I did not touch his adenoids. They were hypertrophied lymphoid tissue secondary to his nasal condition and the correct treatment was to attend to the cause.

I believe in his case the actual original cause was his deflected septum and though perhaps it may be considered a heresy, I believe that I might have left him his tonsils, for I think their condition was merely secondary to his antral suppuration brought on by his deflected septum. I know this statement is against the prevalent belief that the tonsils are the primary source of infection. Let me here once more refer to the operation of submucous resection of nasal septum; it can justly be considered as a prophylactic operation. Will any of you withhold antidiphtheritic serum from a patient suffering from even a mild faucial diphtheria? And yet the vast majority of those patients would do quite well without it. Similarly submucous resection of an obstructive nasal septum will in many cases prevent future sicknesses, will conserve hearing and prevention is far preferable to cure.

To return to our proper subject, other local effects of chronic sinus suppuration are seen in the pharynx, septic adenoids as stated above; infection of the pharyngeal mucosa, sometimes causing an atrophic dryness accompanied by much discomfort, other times a more or less profuse postnasal discharge. More or less serious effects are seen in the orbit, orbital cellulitis, periostitis, blindness, optic neuritis, infection of naso-lachrymal duct and lachrymal sac, meningitis and brain abscess.

A few months ago at the Brisbane Hospital Dr. George Thomson had a boy with orbital cellulitis, periostitis and extreme proptosis of the left eyeball. He had evidence in the nose of left ethmoidal suppuration; external operation revealed a very small left frontal sinus with pus and pus in small ethmoidal cells; free drainage was made into the nose and I believe the boy completely recovered.

I have seen infection of the middle ear which was almost certainly due to chronic antral suppuration, eczema of nostrils and even abscesses of the face.

The second group of effects of chronic sinus suppuration are more remote and are very commonly seen in the pharynx and lower respiratory organs. These include chronic laryngitis, irritating cough (which is infrequently due also to septal deflections) and the great tragedy of bronchiectasis. This is a disease which I believe is almost always secondary to nasal accessory sinus infection and which is only too frequently diagnosed as "consumption."

I have at present under my care a boy, aged fifteen years, who has for a long time suffered from alleged tuberculosis. He has chronic pansinusitis of the purulent type. I have operated on his two antra. I may say that I always attack these first, as they are the largest sinuses. Moreover, the operation is safe and I find that often the other sinuses with care seem to clear up, though sometimes I have found that the antra were evidently merely secondary to other sinus disease, but this is the exception. It is about a month since I operated on this boy, partly under local and partly under general anæsthesia. I am also giving him collosol manganese, one cubic centimetre twice a week. He obviously coughs up less pus and today (June 3, 1926) his mother tells me that his cough is very much better, but I am afraid that he and I will live together for a long time to come.

About three years ago a young woman was referred to me for suspected antral infection, she was emaciated and was coughing up literally cupfulls of most offensive pus frequently in twenty-four hours. For years her stomach had been irritated by various drugs and her digestion further impaired thereby. It appeared almost hopeless, but with local anæsthesia I cleaned out both antra and for a time she appeared to improve, but her condition was too far advanced and she died about six months later. She is an instance of a patient who would probably have been alive and well today if her condition had been dealt with in a suitable manner years previously.

Asthma, this bugbear of the medical practitioner and happy hunting ground of the quack, is at times relieved and perhaps cured by clearing up sinus suppuration, but as to the actual relationship of the two it is a difficult question to decide. I do not think it is the actual infection of the lung by the pustular discharge from the nose, but more a reflex condition, due to intranasal irritation or to

the effect of a toxin generated in the diseased sinus, which has an effect on a hypersensitive nervous system. I have noticed that asthmatics have as a rule a totally different kind of sinus condition from that found in the bronchiectatics. Asthmatics are frequently associated with the polypoid variety of sinus infection or again with another condition which is probably some ethmoidal infection; in this there is no evident pus, no polypus formation, but the mucosa instead of being hyperplastic, is thin and pale and anæmic looking.

Dr. Dowling, of somewhere in the United States of America, has published reports and a system of treatment of asthma in which he states that there is ethmoidal disease, but not ethmoidal disease alone. There is also some other pathological factor, such as a chronic appendicitis, gall stones, renal infection, displaced uterus, constipation and he holds that this other condition lowers the body resistance and so interferes with the health that the ethmoiditis is able to excite this reflex condition which he calls bronchiospasm. It is at least two years since I read his brochure on the subject and I am speaking only from memory, but I think I have given the gist of it. He states that both conditions must be treated and he further emphasizes that the ethmoid operation must be complete, that is the disease must be totally eradicated; he subsequently tamponades the ethmoid area daily with argyrol tampons. There is no doubt that nasal pathological changes frequently have some connexion with asthma. There is no quicker (and I might add no more objectionable) method of relieving an asthmatic attack than by an intranasal spray of cocaine. You are all familiar with the ideas of Dr. Francis and Dr. W. N. Robertson as to the use of the cautery intranasally for the relief of asthma. Whilst on this much debatable subject, I will refer to one other treatment for this distressing malady which was advocated in a recent number of *The British Medical Journal*. I refer to tuberculin. My late and much esteemed partner, Dr. E. J. S. Spark, was a disciple of Dr. Camac Wilkinson and I was closely associated with him for some years during which he treated a number of asthmatics with tuberculin and I think his results were at least equal to those obtained by any other method. It is a treatment which I heartily commend, but like many good things, it is not a method to be learned by rote or applied by rule of thumb; one must have patience and perseverance and treat each patient individually and carefully.

I am getting away from surgery, but I did not promise to adhere to it.

Hay fever is undoubtedly often due to sinus disease and may in these circumstances be relieved by appropriate surgical treatment, submucous resection of the septum, attention to sinus disease *et cetera*.

Digestive disturbances may be caused by entrance of infected secretions, also by the action of absorbed toxins.

The third group of effects comprises the general effects of chronic sinus disease—general ill-health, anæmia, weariness, inability to concentrate, feverish attacks, mental symptoms. These conditions are most pronounced and I have received several letters from patients expressing their gratitude for the wonderful change in their outlook on life and their general well being. Unfortunately those letters went to the waste paper basket; I should have pasted them in a book or perhaps it would have been permissible to publish them in The Medical Journal of Australia and they might have assisted in convincing those doubting members of our profession that there are some virtues in intranasal surgery and intranasal surgeons.

I will tell of a patient recently under my care.

He had previously been operated on for a deflected septum and chronic ethmoiditis and was passed on to me for further observation in the absence of his medical attendant. He is a business man in a good position in Brisbane with no cause for anxiety, but he told me that prior to the operation on his ethmoids and septum he was in a most despondent condition and seriously contemplated suicide. He was relieved of this by intranasal surgery. He had some signs of antral suppuration which cleared up after eight or nine antral lavages and twelve injections of one cubic centimetre of collosol manganese and he is at present apparently in the best of health. I might here mention that he preferred having the injections in the buttock to the arm, as the latter interfered with his golf.

Cures of rheumatism are reported as being effected by removal of sinus infection, some cases undoubtedly authentic, but I believe sinuses are not nearly such a potent factor as the tonsils in these cases. Infected tonsils are infected lymph glands, infected sinuses are infected mucous membrane; from the former one gets septic infection, from the latter septic intoxication.

The improvement in a patient's physical well-being after the radical cure of old-standing sinus suppuration is remarkable, but as is frequently the case with patients after submucous resection of the nasal septum, they often forget the sufferings and discomforts with which they were previously afflicted. It is a common saying, not only amongst the laity, that once a person undergoes an intranasal operation he or she will be continually having further operations on the nose. Unfortunately there is some truth in this statement, but it is very exceptional for the conditions requiring subsequent operations to be actually due to the first operation. The intranasal and accessory sinus anatomy is so intricate and variable that accurate diagnosis is sometimes very difficult and in cases of chronic pansinusitis, especially of the polypus variety, it is impossible to eradicate the whole disease at one sitting. In spite of certain claims to the contrary, I believe the man has never yet been born and never will, who can even in 50% of chronic ethmoidal disease remove the whole of the disease in one operation. When I was doing this post-graduate work in Edinburgh and in London, the one operation I especially wished to see was a complete and successful ethmoidectomy. I still am in the

same position and here we come to the fact of repeated intranasal operations. It is in these chronic conditions, especially the polypus forming variety, that the necessity for repeated operations arises, but these are only very minor procedures and entail very little discomfort to the patient and if the surgeon is a reasonable individual the patient need not be harassed by the financial aspect.

When talking of turbinal operations I dismissed the question very briefly, overlooking the fact that apart from the inferior turbinates the other turbinal bones are part of the ethmoid. I will relate one case history bearing on this.

The patient was a girl, aged twelve years, sneezing a lot, suffocating at times, complaining of headaches behind the eyes and suffering from bronchitis and wheezing. On examination the ethmoidal mucosa was pale and slightly moist, the left middle turbinate bone was enlarged and in contact with the septum. The right middle turbinate was in contact with the septum. Partial middle turbinectomy was done and small cells in the left middle turbinate contained muco-pus. When I last heard of the patient the mother said she was very pleased with the result.

Without doubt if that small operation had not been done, the child would in time have developed more extensive disease, possibly bronchiectasis and after years of a miserable existence would perhaps have died years before her allotted span was passed. Of course I cannot guarantee that the infection is eradicated, but the principle is there. If she needs further operation, it will not be due to the fact that she has already been operated on. Asthmatic symptoms are frequently relieved by the cure of sinus disease, but the outlook I consider is more favourable in the purulent than in the polypus variety. Here again we are faced not infrequently with the question of repeated operations. I will quote one or two cases.

Miss B. was aged about thirty-five years. I did a double radical antrum operation for her about two years ago. She has improved very much in general health, but still suffers from asthma. She unfortunately has ethmoidal disease on both sides, probably sphenoidal also and frontal; in fact she has chronic pansinusitis. Unfortunately she is unwilling to undergo further operation.

Another patient whom I hope to show tonight, is a man, aged about sixty years. He was living in the "Consumptive's Camp" at Dunwich and consulted me something over two years ago. He had pansinusitis of the polypoid variety with bronchiectatic symptoms. I did a double radical antrum operation which was followed by great improvement; subsequently I have opened the ethmoids and sphenoids and on different occasions removed polypoid masses. His health has improved enormously.

Another man whom I have similarly treated for asthma turns up occasionally and has masses of polypus removed and then has relief for some months. I admit I have great difficulty in cleaning up conditions of this type; they require prolonged treatment, but I can give the patients much relief and comfort and the operation, if it can be called such, is apparently less trying than an occasional visit paid to the dentist and ultimately the result is good. I have formed the opinion that sometimes when the major portion of the disease is removed and when other infected ethmoidal cells are present and have drainage, collosol manganese is often of benefit, but in gross infection I think it is useless without some surgical treatment.

I could give endless instances of intranasal disease and each with little peculiarities of its own, but I think I have wearied you enough.

I do not intend speaking of malignant disease tonight and of some other intranasal conditions, but will make a few general remarks.

General Remarks.

I have referred to asthma at different times and affirm that in polypoid sinusitis and in the purulent form intranasal surgery can be of great benefit, but there is a third variety in which there is evident disease of the mucosa, but the membrane is pale and shrunken (I do not mean atrophic rhinitis) and apparently the subject of an infection of some sort, but this condition I think is merely a local manifestation of some general condition. The patient is usually thin and anæmic. In these circumstances the physician when asked for an opinion will report that he can find no organic disease, the heart, lungs, kidneys, alimentary system *et cetera* are sound, yet there is something the matter with the patient. It appears to me that these are cases for the physiological chemist to investigate; there is something wrong with the body metabolism, possibly connected with endocrine dysfunction. I will again instance myself.

I am constitutionally sound, a first class life risk, my heart, lungs *et cetera* are healthy, yet I have suffered from asthma (but not since submucous resection of the nasal septum). For years I have had an atrophic condition of the skin. Nowadays the slightest blow will cause an ecchymosis or even laceration of the skin. I have suffered from chilblains even in the north of Queensland. I know that if I take calcium chloride, my skin condition improves.

I think in many asthmatics there is some such chemical abnormality.

Again the different types of sinus disease, the polypus variety, the pus variety, the atrophic variety, are I believe to a great extent to be elucidated by the metabolist and endocrinologist.

Headaches constitute another huge subject for investigation. Many are due to nasal and accessory sinus conditions and of course many to disease of various parts of the body, to optical conditions. But where the medical man, be he surgeon, gynæcologist, physician, rhinologist, oculist *et cetera* fails, is in the psychological headache and here we are almost all guilty. With very few exceptions we either do not recognize the condition or owing to our ignorance and incompetence we shirk it and many of the poor sufferers are driven to their only refuge, the quack, who to our mortification so often succeeds where we fail.

Many headaches are caused by our artificial modes of living, in the case of women by incessant petty worries and troubles in the home which in time have a cumulative effect, in men by business worries, unnatural hours spent at close work, insufficient sleep.

I recently had a patient, a young man, complaining of headaches and supposed to have frontal sinus trouble. He had a badly deviated septum and doubtful frontal

tenderness. I did a submucous resection; the sinuses were healthy. But next morning when I visited him in hospital he was surrounded by books on psychology, history *et cetera* and piles of typewritten notes. No wonder he suffered from headache; he seldom had sufficient sleep.

Conclusion.

In conclusion let me once more, on behalf of your subcommittee, apologize for the paper you have heard tonight. I acknowledge it is but a brief scrappy compilation, but perhaps it is justified if only to emphasize the enormous ill health and so called neurasthenia which is so often due to accessory nasal sinus disease. To satisfy your subcommittee in respect to their suggested subject, "A Defence of Intranasal Surgery," I will unhesitatingly affirm that the intranasal surgeon is responsible for as much relief of the sufferings of humanity as is a member of any other branch of the profession, for a successful operation on a chronic maxillary sinusitis confers a far greater benefit upon the patient than does a successful operation upon a ruptured vermiform appendix with general peritonitis; the latter merely saves a patient's life, the former saves the patient from years of misery and frequently from an untimely decease. Furthermore, the latter is frequently unsuccessful, the former is rarely unsuccessful.

SYPHILIS AND INSANITY.[1]

By S. Evan Jones, M.B. (Sydney),
Medical Superintendent, Psychiatric Clinic, Broughton Hall, Sydney.

This paper is an analysis of the ætiological relationships of syphilis with the psychoses based on the admissions to the Mental Hospital, Callan Park, for the period 1910-1920.

The application of serological tests for syphilis has been of great significance in elucidating ætiological problems and since the introduction of the Wassermann technique to Australia by Froude Flashman it has been a routine procedure to examine the sera of all patients admitted to the mental hospitals. The present analysis is based on the correlation of the results of these examinations with clinical diagnoses over a period of ten years. I have accepted a response to the Wassermann test as sufficient evidence of previous syphilitic infection.

The total admissions to Callan Park for the period mentioned were 2,573 males and 2,053 females, a total of 4,626. A response of serum or cerebro-spinal fluid to the Wassermann test or undoubted clinical evidence of syphilis was found in 575 males and 219 females, a total of 794 or percentages of 22·3, 10·5 and 17·1.

Table I shows the correlation of the positive findings with clinical diagnosis.

It will be seen that there are several groups in which syphilis is the primary factor and another group in which it is a secondary factor or in which its occurrence is accidental.

General Paralysis.

The largest group is that of general paralysis, constituting 12·9% of male and 2% of female or 8% of total admissions. These cases have been analysed from the clinical point of view to determine whether there is a typical paretic psychosis. The patients were classified according to the chief psychological symptoms and the result is shown in Table II. The cases fall into eight groups which have been termed simple dementia, characterized by progressive dementia without any definite psychotic symptoms; euphoric dementia in which effective exaltation was pronounced; euphoric expansive in which euphoria was associated with expansive delusions; expansive manic in which there were expansive delusions with increased psychomotor activity; manic in which the clinical picture resembled that of ordinary acute mania; manic depressive in which there were alternating states of mania and depression; depressive in which affective depression with or without delusions was present and finally a small group of cases are included under the heading paranoid, since delusions were present without other psychotic symptoms.

There is one common factor in all these groups, namely, dementia and psychotic symptoms in the true sense of the term were present in 60% of

[1] Read at a meeting of the Section of Neurology and Psychiatry of the New South Wales Branch of the British Medical Association on June 17, 1926.

Table I.—Showing Distribution under Clinical Headings of Patients in Whom There Was Evidence of Syphilis.

Condition.	Male.		Female.		Total.	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Dementia paralytica	332	12·9	42	2	374	8
Cerebral Syphilis: Syphilitic epilepsy (7 males and 3 females); Apoplexies (41 males and 8 females); Syphilitic dementia (8 males and 2 females); Toxic confusional psychoses (12 males and 1 female); *Tabes dorsalis* (9 males)	77	3	14	0·6	91	2
Total luetic insanities	409	15·9	56	2·6	465	10
Non-luetic psychoses	166	6·4	163	7·9	329	7·1
Total cases in which there was evidence of syphilitic infection	575	22·3	219	10·5	794	17·1

TABLE II.—SHOWING PROPORTIONS OF DIFFERENT TYPES OF PARETIC DEMENTIA.

Condition.	Male.		Female.	
	Number.	Percentage.	Number.	Percentage.
Simple dementia	101	30·4	20	47·6
Euphoric dementia	30	9	7	6·6
Euphoric expansive	47	14·1	1	2·4
Expansive manic	44	13·2	1	2·4
Manic	42	12·6	5	12
Manic depressive	18	5·4	6	14·2
Depressive	42	12·6	2	4·7
Paranoid	8	2·4	..	..
Total	332	..	42	..

cases. There is a possibility of a fallacy in this estimate in that dementia tends to submerge all other mental symptoms and if a patient is admitted late in the course of his illness there will be less likelihood of psychotic symptoms being prominent than in a patient in the earlier stages.

Dementia is the symptom that is to be expected from the nature of the pathological processes underlying general paralysis and is to be regarded as a diffuse focal neurological sign rather than as a psychological disorder. Psychotic symptoms on the other hand probably have no dependent relationship

TABLE IIA.—SHOWING FREQUENCY OF EPILEPTIFORM CONVULSIVE SEIZURES IN THE DIFFERENT GROUPS.

Condition.	Percentage of Patients with Epileptiform Seizures.
Simple dementia	20
Euphoric dementia	20
Euphoric expansive	20
Expansive manic	33
Manic	16
Manic depressive	6
Depressive	6
All cases	16

on syphilis *per se*, but should be regarded rather as the result of release of individual tendencies as a consequence of the loss of nervous stability.

Of psychological symptoms euphoria is the most frequent, occurring in 50% of cases, expansive delusions occur in 30%. The association of these two symptoms constitutes the classical picture of general paralysis, that is from the mental aspect. However, they are by no means pathognomonic of general paralysis and are met with in *dementia præcox*, mania and paraphrenia. Euphoria and expansive delusions are not necessarily associated; there is frequently euphoria without expansiveness and on the other hand expansive delusions are present at times with depression. Psychomotor excitement was seen in 30% of the patients and not infrequently patients with general paralysis present the typical clinical symptoms of acute mania. In my experience acute delirious mania rarely occurs except in cerebral intoxications and usually in *dementia paralytica*. It seems reasonable to suggest that manic symptoms are toxic effects, produced directly by the spirochæte or indirectly by toxic katabolic products resulting from tissue disintegration.

Alternating states of mania and depression were recorded in 5% of the patients and the duration of their illnesses appears to be longer than that of patients suffering from the other forms. Emotional depression was presented as an outstanding feature by 12%; it was usually associated with delusions, either somatic or persecutory; these delusions not infrequently were expansive in nature.

A small group of 2·5% was characterized by the presence of persecutory delusions without any affective or psychomotor disturbances.

Hallucinations are not frequent, they were prominent in 10% of patients and occurred in all types, but more frequently in those of the depressive and expansive manic groups. Auditory hallucinations were twice as common as visual.

Epileptiform seizures occurred in 16% of the patients, most frequently in the expansive-manic types (33%) and least often in the manic depressive form (10%).

Tabo-Paralysis.

Tabo-paralysis, the intermediate form between general paralysis and tabes is characterized by the presence of neurological symptoms of tabetic nature. The mental picture is that of ordinary *dementia paralytica* and the patients have been included in the above analysis.

Expectation of Life.

Table III. shows the comparative expectation of life of the different types of general paralytics

TABLE III.—SHOWING EXPECTATION OF LIFE OF PATIENTS SUFFERING FROM GENERAL PARALYSIS AFTER ADMISSION TO MENTAL HOSPITAL.

Condition.	Months.
Simple dementia	11
Euphoric dementia	15
Euphoric expansive	11
Expansive manic	13
Manic	9
Manic depressive	16
Depressive	11
Average for all males	11
Average duration for all females	12

after admission to a mental hospital, based on 266 males and 40 females who died in the period under review.

The average for all forms in the males is eleven months; it is lowest in the manic types (nine months) and highest in the alternating types (sixteen months). The average for female patients was twelve months.

Death Rate.

Spontaneous remissions occurred in 10% of the males and a number were discharged relieved or arrested after Swift Ellis treatment. During the ten year period 332 male patients with general paralysis were admitted and 266 died; 42 females were admitted and 40 died. The hopeless prognosis of general paralysis is indicated in Table IV. which shows the deaths of general paralytics compared

Table IV.—Showing Ratio of Admissions and Deaths of General Paralytics to Total Admissions and Deaths.

Groups.	Patients.		Deaths.	
	Total Admissions.	General Paralytics.	Total Deaths.	Deaths of General Paralytics.
Males	2,573	332	815	266
Percentage		12·9		32
Females ..	2,053	42	483	40
Percentage		2		9
Total	4,626	374	1,298	306
Percentage		8		23

with the total deaths at the hospital. On the male side generaly paralysis represents 13% of admissions, but 32% of the deaths; on the female side 2% of admissions and 9% of deaths. Inclusively general paralysis is responsible for 8% of admissions and 23% of deaths.

Connubial Syphilis.

In the period under review there were seven instances in which husband and wife were both admitted to the hospital suffering from cerebral syphilis. In six instances the men were general paralytics and in the other the condition was one of syphilitic epilepsy. All the females suffered from general paralysis.

This may be taken to support the view that there is a neurotropic variety of spirochæte.

Juvenile General Paralysis.

There were records of nine male and three female patients suffering from juvenile general paralysis. The average age of the patients was twenty-one, the youngest sixteen and the oldest twenty-six.

With regard to the parental history of these patients, in the males there was a history of paternal general paralysis in three instances, in another a history of maternal insanity apparently not syphilitic, in one the parents appeared quite healthy, whilst in four reliable information was not obtained. Of the female patients, the mother of one had died of general paralysis and the father of cerebral syphilis, the father of another had suffered from traumatic psychosis and in regard to the third no information could be obtained.

The average life of all patients after admission was fifteen months.

Cerebral Syphilis.

Seventy-seven men or 3% of males and fourteen women or 0·6% of female patients admitted were diagnosed as suffering from syphilitic but not paretic forms of insanity; most of these would be included under the generic term cerebral syphilis. The majority suffered from some form of vascular disease, in 41 males and eight females there were hemiplegic or monoplegic symptoms, due to hæmorrhage or thrombosis.

The average age of these apoplectic patients was forty years. Seven males and one female were diagnosed as suffering from syphilitic epilepsy, the pathological lesion underlying which is probably a terminal endarteritis. Eight males and two females suffered from syphilitic dementia which in contrast to paretic dementia has its onset at a later age, is more slowly progressive and is due to diffuse vascular lesions or myelitis rather than to primary parenchymatous degeneration.

There were nine cases of tabes, all the patients being males in whom dementia was the outstanding psychic symptom, and indeed dementia is characteristic of all these forms of syphilitic insanity as of general paralysis, though it is of milder grade and lacks the progressive characters of the latter disease.

Here too the mental changes appear to be focal neurological signs rather than psychotic symptoms.

There was an interesting group of twelve males and one female who suffered from confusional psychoses; in all there was a history of recent syphilitic infection and in many there were secondary syphilitic lesions. Confusional psychoses are usually of toxic origin and the occurrence of these cases suggests that the spirochæte is capable of exercising an intense neurotoxic action in the early stages of the disease.

Table V.—Showing Clinical Classification of Non-Paretic Luetic Psychoses.

Condition.	Male Patients.	Female Patients.	Total.
Syphilitic epilepsy ...	7	3	10
Apoplexies	41	8	49
Syphilitic dementia ..	8	2	10
Confusional psychoses	12	1	13
Tabes dorsalis	9	..	9
Total	77	14	91

One of this group of patients manifested the rare condition acute syphilitic meningitis which may occur in the early secondary stage with fulminating symptoms rapidly ending in death.

Non-Luetic Psychoses.

Syphilis played the important rôle in the causation of the conditions previously described. Excluding these, a response to the Wassermann test was obtained in 166 males (6%) and 163 females (8%), a total of 329 (7·1%). In the majority of these the association with syphilis was probably accidental. Table VI. shows the incidence

Table VI.—Showing Clinical Classification of Cases in Which Syphilis was a Secondary Factor or Accidentally Associated.

Condition.	Male Patients.	Female Patients.	Total.
Congenital mental deficiency	8	6	14
Epilepsy	6	8	14
Dementia præcox	17	22	39
Mania	24	21	45
Melancholia	33	39	72
Mania delusional	24	21	45
Melancholia delusional	9	13	22
Senile dementia	8	10	18
Alcoholic psychoses .	32	22	54
Traumatic psychoses	5	1	6
Total	166	163	329

of syphilis in the various diagnostic groups. In some groups it is probable, however, that syphilis was at least a secondary factor.

Traumatic psychoses following head injuries are relatively infrequent, representing about 0·3% of all admissions, yet there was evidence of syphilis in five male patients and one female patient or 0·13% of total admissions. Thus there is a higher proportion of syphilitics amongst patients with cerebral traumatic psychoses than amongst the general admissions. It has been held that cerebral trauma is a not unimportant secondary factor in the ætiology of general paralysis. The group referred to above represents the reverse, namely, that syphilis is a secondary factor in the causation of traumatic psychosis. In the cases of epilepsy, senile dementia and congenital mental deficiency too syphilis played an ætiological rôle, but in what degree we cannot say.

The equal incidence of syphilis in these groups of non-luetic psychoses in males and females is in striking contrast to the disparate incidence of luetic psychoses, indicating that woman is apparently not less exposed than man to cerebral syphilis, but that man is predisposed by some unknown factors to these late syphilitic manifestations.

Conclusions.

Evidence of previous syphilitic infection was found in 22·3% of male, 10·5% of female and 17·1% of all patients admitted to the Mental Hospital, Callan Park, during the period 1910 to 1920.

In 15·9% of males, 2·6% of females and 10% of total number of patients admitted syphilis was primarily and directly responsible for the insanity.

It is probable that syphilis played at least a secondary rôle in a proportion of the other cases. The characteristic psychological feature of syphilis of the nervous system is dementia.

There is reason to believe that the action of syphilis on the nervous system is toxic as well as degenerative.

Acknowledgment.

I am indebted to Dr. J. A. L. Wallace for permission to make use of material for this paper.

THE DIFFERENTIAL DIAGNOSIS OF CEREBRAL SYPHILIS.[1]

By S. J. Minogue, M.B., Ch.M., Dip. Psychiatry (Sydney), *Resident Medical Officer, Mental Hospital, Gladesville.*

Jelliffe and White in opening their discussion on cerebral syphilis say:

> The physician with his eye rivetted upon a clinical picture, be it an amyotrophic lateral sclerosis, a failing memory, a persistent nervous weakness, an isolated cranial nerve palsy, a profound metabolic disorder, may readily overlook the fact that syphilis is the unique cause for these different conditions.(1)

How varied are the manifestations of cerebral syphilis! In general hospitals we see the various nerve palsies, in mental hospitals the various mental diseases—the result of cerebral syphilis. In Callan Park there is an organic dement with a right sided hemiplegia *plus* aphasia—the end result of a cerebral syphilis of many years' standing. In Gladesville there is a true clinical acute melancholic—the concomitant of a cerebral syphilis. In New South Wales fifty persons die every year as a result of the most tragic of all diseases—general paralysis of the insane.

A differential diagnosis of cerebral syphilis would include then well nigh all known forms of nervous and mental disease. Happily description is simplified by following the classical classification of cerebral syphilis into the two groups: (i.) Meningo-vascular syphilis, (ii.) central syphilis which includes general paralysis of the insane and *tabes dorsalis*. (I have omitted *tabes dorsalis* as being beyond the scope of this paper.)

Meningo-Vascular Syphilis.

In the meningo-vascular form of cerebral syphilis we have three processes at work, namely slowly advancing meningitis, gummatous formation and luetic vascular diseases. "In most cases one of these processes predominates, but the process is rarely limited to one of them."(2)

(i.) If a cerebral gumma or gummata be present, a clinical picture suggestive of brain tumour is presented and must be differentiated from it.

(ii.) Specific meningitis manifests itself usually in the form of cranial nerve paralyses, usually of the third nerve and the diagnosis as a rule suggests itself.

(iii.) Specific vascular diseases may be diffuse or strangely limited in their extent.

[1] Read at a meeting of the Section of Neurology and Psychiatry of the New South Wales Branch of the British Medical Association on June 17, 1926.

The brain substance in these lesions is affected not only as a result of the defective circulation in the vessels, but is also damaged by the syphilitic toxin present. A bewildering array of clinical symptoms, simulating all forms of nervous disease and many forms of mental disease, is met with. All forms of paralysis, epileptiform seizures, aphasias, numerous varieties of sensory disturbances, apoplexies are common. In addition there may be some mental deterioration which is as a rule of the nature of an organic dementia. The shade of mental deterioration varies enormously; in the more severe grades it approaches very closely that produced by general paralysis of the insane and cannot be differentiated from it clinically. This is the pseudoparesis of Kraepelin, the differential diagnosis of which I will discuss later.

In addition to the above lesions Kraepelin has described a number of other cerebral specific lesions in which no anatomical basis can be demonstrated. These are syphilitic neurasthenia, headaches, dizziness, transitory paralyses of various kinds and also acute hallucinatory psychoses.

A differential diagnosis of all these lesions is impossible. We must remember that the manifestations of cerebral syphilis are protean and in every nervous lesion we must think of syphilis as a possible cause and seek for evidence of it by an examination of the blood by the Wassermann test and if necessary by a full examination of the cerebro-spinal fluid. A most useful help in our diagnosis is the presence of an Argyll-Robertson pupil which, as will be discussed later, is almost pathognomonic of the presence of cerebral syphilis. The absence of an Argyll-Robertson pupil, however, is common in all cases of cerebral syphilis and therefore, if a patient has normal pupils, we are not justified in assuming that his disease is not a manifestation of cerebral syphilis.

Central Syphilis or General Paralysis of the Insane.

In considering a differential diagnosis of general paralysis of the insane we must remember that the ultimate result of this disease is a widespread degeneration of the cerebral cortex. Therefore the only diseases that should enter into a differential diagnosis, are those giving rise to a similar degeneration. For all practical purposes these conditions are three in number, alcoholic pseudoparesis, certain forms of arteriosclerotic insanity and pseudoparesis. In practice, however, we find that general paralysis of the insane is confused with many forms of mental disease. Excited general paralytics are frequently regarded as suffering from acute mania, depressed general paralytics as acute melancholics, dementing general paralytics as senile dements, those who have cerebral seizures, are frequently thought to be epileptics and so on. On the other hand, we see patients with grandiose ideas diagnosed wrongly as general paralytics. Other diseases are frequently seen in which a wrong diagnosis of general paralysis of the insane has been given. For example, a patient with a tumour of his *sella turcica* was diagnosed as a general paralytic.

These mistakes arise solely from the fact that practitioners rely for a diagnosis solely on the mental state of the patient, without heeding the physical signs that may be present.

The diagnosis of general paralysis of the insane rests upon the history of the patient and also upon a full physical and mental examination. In all suspected cases a routine Wassermann test of the blood and a full examination of the cerebro-spinal fluid should be made.

Now general paralysis of the insane occurs in the vast majority of instances in the prime of life. In men it is perhaps the most characteristic form of insanity peculiar to that age. In fact if a man in the prime of life who has previously been sane, becomes gradually insane, be his insanity maniacal, depressive or dementing, one feels justified in strongly suspecting that his disease may be general paresis.

In spite of the fact that most psychiatrists diagnose this disease instinctively, yet all seek for the typical clinical signs of the disease—the general bearing and euphoria of the patient, the pupillary changes, the trombone tremors of the lips and tongue, the slurring speech and a history of the typical cerebral seizures.

The most characteristic of these signs are the pupillary changes. We see anisochorea, irregular pupillary outlines and above all the characteristic Argyll-Robertson pupil. Now an Argyll-Robertson pupil, with certain rare exceptions, such as certain rare cases of alcoholic cerebritis and some tumours of the mid-brain, is pathognomonic of the presence of cerebral syphilis. It occurs in the meningo-vascular and central forms, but is far more common in central syphilis.

But 30% of all true general paralytics and the vast majority of patients with meningo-vascular syphilis have normal pupils.[1] Therefore whilst an Argyll-Robertson pupil indicates with great certainty the presence of cerebral syphilis, its absence is no criterion that cerebral syphilis is not present.

Now the conditions with identical clinical signs are three in number, namely alcoholic pseudoparesis, certain cases of arteriosclerotic insanity and the pseudoparesis of Kraepelin.

Alcoholic Pseudoparesis.

After prolonged alcoholism a widespread cortical degeneration is sometimes produced. The condition is comparatively common and the prognosis is as a rule favourable. Tremors of the lips and tongue, slurring of the speech, definite euphoria and expansiveness of ideas are seen. Hallucinations of sight are common. An Argyll-Robertson pupil has been described, but is extremely rare. Epileptiform seizures are often seen. The diagnosis rests upon a history of prolonged alcoholism. The presence of hallucinations of sight is often a good guide, for they are very rare in general paralysis of the insane. The blood does not react to the Wassermann test,

whilst no abnormality is found when the cerebro-spinal fluid is examined.

Arteriosclerotic Insanity.

In the widespread cortical degeneration, often the concomitant of advanced arteriosclerosis, a clinical picture strongly suggestive of general paralysis of the insane is sometimes seen. The patient is euphoric, his ideas are expansive, there are tremors of his lips and tongue, even slurring speech has been described; epileptiform seizures are common. The diagnosis is rarely difficult. The disintegration of the personality is rarely so profound as it is in general paralysis of the insane. The disease tends to occur much later in life, whilst there are present as a rule signs of advanced arteriosclerosis. There will be also normal findings in the blood and cerebro-spinal fluid.

Pseudoparesis of Kraepelin.

If extensive meningo-vascular syphilis is present, the brain will not only be extensively damaged by the defective circulation, but will also be so profoundly poisoned by the toxin present that a degeneration very similar to that seen in general paralysis of the insane is produced. This is the pseudoparesis of Kraepelin, a condition by no means common. The cases vary greatly in severity, in the more severe forms they are indistinguishable clinically from true general paralysis of the insane. The patients have expansive ideas, the typical tremors of the lips and tongue, the slurring speech and in many cases the true Argyll-Robertson pupil. Cerebral seizures are common.

The differential diagnosis from true general paralysis of the insane is difficult and in some cases impossible. Hallucinations of sight are said to be common, whilst the mental deterioration is rarely so pronounced as it is in general paralysis of the insane. In the great majority of cases the differential diagnosis rests upon an examination of the cerebro-spinal fluid. In some instances the results of this examination are confusing. The test of treatment is then tried. But if the luetic process has permanently damaged the cortex, little improvement will follow treatment. The ultimate diagnosis then is only a matter of time. The general paralytic will in all probability be dead in two to three years, the pseudoparetic will live as a hopeless dement for years.

The differential diagnosis of these four conditions is thus somewhat uncertain on clinical grounds alone. An Argyll-Robertson pupil alone will indicate the presence of cerebral syphilis and in all probability will point to a diagnosis of general paralysis of the insane.

The ultimate diagnosis rests upon an examination of the blood by the Wassermann test and upon a full examination of the cerebro-spinal fluid.

The Blood.

Taken in conjunction with the clinical signs a positive response to the Wassermann test is of great value in arriving at a diagnosis of cerebral syphilis. Yet we must remember that it does not prove that the patient's disease is due to syphilis. I have seen an undoubted alcoholic pseudoparetic whose blood reacted to the Wassermann test.

Failure to react to the Wassermann test is of no clinical value, for it occurs in many cases of meningo-vascular syphilis and I have seen it often in true general paralysis, although this is against the view held by Jelliffe and White who insist that an absence of reaction is against a diagnosis of general paresis.

The Cerebro-Spinal Fluid.

Four reactions of the cerebro-spinal fluid are at present relied on for the diagnosis of syphilitic disease of the nervous system. These are the Wassermann reaction, the presence of a lymphocytosis of a greater or lesser degree, a globulin reaction and a typical colloidal gold reaction. Normal findings will at once exclude alcoholic and arteriosclerotic insanity. The presence of reactions will indicate with certainty the presence of cerebral syphilis. Fluids from general paralytics are much more responsive to these tests than fluids from patients with meningo-vascular syphilis, whilst the colloidal gold test would give the typical paretic curve (5555432000). In case of doubt "the re-examination of the cerebro-spinal fluid after a few months of energetic treatment will usually decide whether the disease is of the 'parenchymatous' or 'interstitial' form."[3]

Summary.

1. Cerebral syphilis is divisible into two classes, the meningo-vascular and the central forms.

2. The manifestations of meningo-vascular syphilis are protean, simulating well nigh all forms of nervous disease, besides many forms of mental disease. The possibility of the presence of meningo-vascular syphilis must be kept in mind in every condition associated with symptoms referable to the nervous system.

3. General paralysis of the insane must be differentiated from mental diseases, such as acute mania, acute melancholia, epilepsy *et cetera*. Difficulty is met with in distinguishing it from alcoholic pseudoparesis, certain forms of arteriosclerotic insanity and the pseudoparesis of Kraepelin.

Its ultimate diagnosis depends on (i.) a response of the blood to the Wassermann test and (ii.) the production of the "four reactions" in the cerebro-spinal fluid.

4. The pathological tests do not always serve to differentiate general paralysis of the insane from pseudoparesis. We are helped though, by remembering the frequency of general paralysis of the insane and rarity of pseudoparesis; oftentimes by the response of pseudoparesis to treatment; again, by the diminishing in intensity of the cerebro-spinal fluid reactions in many cases of pseudoparesis after intensive antisyphilitic treatment. If we are still in doubt, time alone will tell. The mental condi-

tion of the pseudoparetic will remain stationary for years, whilst the general paralytic will go steadily downhill to an inevitable end.

References.

(1) Jelliffe and White: "Diseases of the Nervous System," Fourth Edition, 1923.
(2) Bleuler: "Text Book of Insanity," 1924, page 245.
(3) Buzzard and Greenfield: "Pathology of the Nervous System," 1921, page 47.

CISTERNA MAGNA PUNCTURE.

By J. F. Mackeddie, M.D. (Melbourne),
Physician to Out-Patients, Alfred Hospital, Melbourne.

It will be remembered that the arachnoid not only bridges over the sulci of the brain into which the pia dips, but follows a similar course in relation to bigger depressions. Thus it leaps at the base of the brain from one temporal lobe to the other, allowing the cerebro-spinal fluid to form a pool—the *cisterna basilaris*. Similarly it passes over the fourth ventricle to the under surface of the cerebellum and between it and the ependymal roof of the fourth ventricle is the *cisterna magna*. The latter communicates freely with the *cisterna basilaris* and with the ventricles *viâ* slits in the roof of the fourth ventricle, the foramina of Majendie and Luscka, and of course, with the general circulating cerebro-spinal fluid of the cord.

To tap this cistern a needle is passed between the occiput and the atlas, the tissues pierced being practically the same as in lumbar puncture—occipito—atlantal ligament, *dura mater* and arachnoid.

Any liquid heavier than the cerebro-spinal fluid introduced here as long as the head and neck are on a higher level, will gravitate down the spinal theca. If it has the added properties of being opaque to X rays and innocuous to nerve tissue, it will be an ideal diagnostic agent.

Sicard chanced upon something that combined the above properties—"Lipiodol," a fairly strong solution of iodine in poppy oil.

I shall now consider the steps taken in *cisterna magna* puncture.

The first landmark to be demonstrated is the spinous process of the axis. Assure yourself of its position before laying the patient down. You may put a pencil mark on the skin corresponding to the point of this process, if there has been any difficulty in placing it. Usually you will be able to demonstrate it quite easily. Another point that it is advisable to locate while the patient is sitting up, is the middle point of the neck. The lying posture may distort this and if it is a fat neck you may not be quite sure of being in the middle line. Put a small mark just under the external occipital protuberance.

The patient is laid on the left side with the head slightly flexed. You must see that the head is placed higher than the neck and shoulders. This is of no importance in so far as the cisternal puncture is concerned, but if "Lipiodol" is to be introduced, it must get its initial start downwards. It has occurred that the "Lipiodol" has found its way into the subarachnoid space at the base of the brain and did not begin its descent for some days without, however, doing any harm.

If the finger is placed on the spinous process, the point of puncture is immediately above and close to the finger. This spot will be exactly in the mesial plane. This you have made sure of before laying the patient down. If you are in doubt at all of the little depression just above the spinous process of the axis, you may confirm it in this way. Lay a flexible metal tape measure on the glabella and the upper part of the external auditory meatus. Lay it so that it extends back nearly to the middle line of the neck; it will point directly into this supra-axis depression. You may, if you like, mark on the neck the line of the tape measure that reaches backwards from the ear. This gives you the exact plane in which the needle will travel. All this is done with the head at slight flexure. The marks that you have made, are not included in the actual field of the puncture, so that you can sterilize without erazing them.

You may anæsthetize with "Novocaine," first raising the intradermal bleb and then passing through this bit by bit in the direction in which your puncture needle is to go, but never penetrating deeper than three centimetres. Sir James Purves-Stewart always freezes the skin and goes right through without any further anæsthetizing and without any pain to the patient. With the former method you can be always sure of giving no pain whatever.

You have made sure of your entry point and pushed the needle, say, one and a half centimetres into the neck. Free the needle well so as to have complete control of it. The further course of the needle is the junction of two planes—the mesial plane and a plane running through the entry point, the upper part of the external auditory meatus and the glabella. When you set the needle in those planes it will not be perpendicular to the surface of the neck; the point will look slightly upwards. You push your needle straight through the middle of the neck at the same time directing its course in the glabello-meatal plane. A lead pencil placed erect in the ear will emphasize the glabello-meatal plane. At first, seeing that you have your attention fixed on the glabella-meatal line, there is a tendency to point the needle at that line; on stopping near your objective to take stock, you are surprised to find your needle right out of the mesial plane. However, this is easily overcome by practice.

You can push fearlessly on up to three centimetres, provided you are in the right line. You are not going to tap the *cisterna magna* under 3·5 centimetres. At this point withdraw the stilette and push carefully on. In all probability you will feel the resisting occipito-atlantal ligament which you will distinguish quite easily from bone.

A little thrust will tap the fluid. If no fluid comes, use the stilette to clear the needle. If still no fluid, press on with a screwing motion, using the stilette frequently. You may be at the 4·0, 4·5 or 5·0 centimetre mark. Make sure at this stage of your direction being absolutely true. You may reach the 6·0 centimetre mark or more before success. In the great majority of cases round about 4·5 centimetres the fluid appears. Meantime, see that the patient has not moved his head from the semi-flexed position.

All this detail, of course, is for the beginner. Sir James Purves-Stewart lays his left forefinger on the spine of the axis, turns the ethyl chloride spray on to the skin immediately above his finger point, puts a lead pencil erect in the ear of the patient and with his eye on the pencil and the glabella, passes his needle straight into the *cisterna magna*.

Preparation of Patient.

The bowels should have been well opened. If the puncture is to be made in the forenoon, only something light to eat should be given first thing in the morning.

No morphine is required. It is a perfectly painless procedure and the withholding of food till late in the afternoon frees it from any untoward symptoms. The patient is shaved from the external protuberance downwards.

Needles.

We find it convenient at the Alfred Hospital to have very conspicuous marks on our needle at the maximum limit. Thus we have three needles, one has a small ring of solder round it at five centimetres, in another the solder is at six centimetres and a third has its ring limit at seven centimetres. All the needles are marked off in centimetres from the point to the solder ring. This prominent mark serves two useful purposes. It keeps your limit strikingly before you and is an easy mark from which to glance along and see how many centimetres you have yet to spare. The thickness of the neck of course determines the choice of needle.

An ordinary lumbar puncture needle of medium size does very well. If it is too thin it will not carry the graduated marks well. Besides "Lipiodol," even when warmed, is viscid and will not readily pass along a needle of small bore.

Meantime your ampoule of "Lipiodol" has been lying in hot water. You break it into a small receiver and draw it into the barrel of a small hypodermic syringe. When a couple of cubic centimetres have been collected from the cisternal fluid, the "Lipiodol" is very slowly propelled into the cerebro-spinal fluid, followed by a little saline solution to clear the "Lipiodol" out of the needle.

Should the cerebro-spinal fluid cease to flow after a cubic centimetre or two has run out, do not put the "Lipiodol" in. Sometimes the needle slips out of the *dura mater*. Draw a little fluid into a small syringe to make sure before delivering the "Lipiodol."

Leave the patient moderately propped up. Make his head comfortable and do not disturb him for an X ray picture for two hours at least. A second picture is taken on the following day.

With some slight variants the above is the routine method of cisternal approach. Sicard, for example, used to have a small syringe with saline solution attached to his needle and as his objective was approached, he tried to sense his entry into the *cisterna* by the ease with which he could discharge the saline solution. We have tried this and found that the saline solution could be injected into the loose tissue about the *foramen magnum* without any appreciable obstruction, with the result in one instance that a patient is now carrying about some "Lipiodol" in that neighbourhood—without any harmful effect.

Others have a partially exhausted syringe fitted into the needle so that immediately the *cisterna* is entered, fluid must rush into the barrel. Here, again, it has been found that a fragment may engage in the needle and prevent the barrel filling and under those conditions pushing on may be very dangerous. On the whole we think that Purves-Stewart's method is the best. Take your bearings most accurately, examine from time to time the line of your needle, use your stilette effectively and have a sharp needle. The last is of paramount importance. A blunt short point is more deadly than a very long, very sharp point. Of a moderately short bevel and very sharp is the ideal needle.

One more point. In spite of most careful alignment you may strike bone. A careful survey of your planes will hardly fail to disclose that you are pointing just on the high side and therefore it is occiput you are hitting or on the other hand, it is atlas. You must then withdraw your needle a considerable way and make a fresh line of thrust. You cannot "wangle" your way in.

I cannot close this without two short *addenda* to my former article on "Lipiodol" diagnosis.

I stated there that broadly speaking lumbar puncture would determine whether there was an obstruction or not; that is, that absence of Froin's syndrome indicated a free theca.

Recently, in one case, in spite of the absence of Froin's syndrome, "Lipiodol" was used. It remained suspended at a definite thoracic level for one day and later discharged into the normal sacral region. Still, operation was decided upon at the site indicated and a central sarcoma of the cord was disclosed. This apparently bulged out the cord sufficiently to obstruct the cerebro-spinal fluid flow intermittently and so there was no Froin's syndrome.

There is a woman in the Alfred Hospital recovering from a cervical laminectomy. She was admitted with pain down her right arm and the back of the neck, paresis of her right leg and arm, slight weakness of her left arm, a definite Babinski's sign of the right toe, a doubtful response on the left side, no posterior column involvement of any kind, analgesia more evident in her "good" leg—Brown Séquard syndrome—and no right abdominal reflex. The upper limit of sensory loss was very indefinite.

Localization was approximated on two definite findings. Her constant pain was over her deltoid, going down the outer arm, while her bicipital and supinator jerks were just detectable. The triceps jerk was most active, apparently a lesion of the fifth and sixth cervical segments; but as exact localization is of supreme importance in the neck, it was decided to give "Lipiodol" by the cisternal route. We made a provisional diagnosis of a *pachymeningitis hypertrophica cervicalis* on the grounds that there was a history of quite severe girdle pains at one time, indicating some meningeal involvement lower down. The cerebro-spinal fluid from lumbar puncture seemed to confirm us in this diagnosis, for the Wassermann test yielded a positive reaction and there was a great excess of globulin and in other respects the signs of Froin's syndrome were present. But on examination of the cisternal fluid the Wassermann test failed to yield a reaction. So we had to content ourselves by saying that there was compression of some kind. No "Lipiodol" had passed the upper limit of the fifth cervical body.

This was our first cervical "Lipiodol" injection and we did it with some trepidation. It increased her pain considerably and gave her a bad time generally. Bowel and bladder incontinence followed. But in a few days the condition was much what it was before the use of "Lipiodol."

At the operation it was seen that a small, soft growth was pressing into the right lateral half of the cord at the fifth and sixth segment, forcing the left lateral cord against the bony theca. The posterior columns were comparatively free from pressure. The fifth and sixth posterior nerve roots were loosely incorporated in the growth. The tumour was removed with difficulty.

Surgical handling of the cervical cord is serious and her condition for a few days was very bad, though never desperate. Incontinence of fæces and bladder followed at once. Her right arm and leg were absolutely paralysed and there was only slight movement of left leg and arm, but never a return of what she described as the "old pain." As the roots involved in the growth were left intact, though pulled about and as the cord was not invaded by the growth we feel confident of her ultimate recovery.

This case suggests one or two interesting reflections. We were assured that there was no mistake about the definiteness of the positive Wassermann reaction in the fluid below the obstruction and of the absence of a reaction with the fluid above. The question arises: Can a Wassermann reaction be upset by a Froin's syndrome?

The other case shows that the absence of Froin's syndrome is not incompatible with some degree of compression.

Again, it has been said that "Lipiodol" may set up persistent excess of pain in meningeal areas, so wide that operation is out of the question; and hence one may add enormously to the distress of the patient. In not one of our series of eighteen patients did anything but a transient and local exacerbation of pain take place, however violent. In the case above one would have expected permanency of the extra pain, but that was not so any more than in the others. This was the only case in which the "Lipiodol" was not retrieved at the operation and for a very good reason—all the time that the cord was being exposed the patient's head was hanging low and the "Lipiodol" must have crept back probably as far as the subarachnoid space at the base of the brain. She has been too ill to be submitted to X ray examination, but that will be done later on.

Finally, owing to the "Lipiodol" localization, it was the smallest operation area for laminectomy we had ever seen. Mr. Trinca was the surgeon.

References.

(1) J. A. Sicard, J. Paraf and L. Laplane: *"Radio-Diagnostic Rachidien Lipiodolé," La Presse Médicale*, October 24, 1923.
(2) James Purves-Stewart: "Clinical Lecture on Triple Puncture, Lumbar, Cisternal and Ventricular," *The Lancet*, December 5, 1925, page 1159.
(3) Percy Sargent: "Localization of Cerebral and Spinal Tumours," *The British Medical Journal*, April 19, 1924, page 716.

A NEW METHOD OF TREATMENT OF CHILBLAINS.

By Leonard J. C. Mitchell, M.D., B.S. (Melbourne),
Melbourne.

The question of the treatment of chilblains has always interested those who suffer from this annoying and at times crippling condition, but has failed to attract serious attention from immune observers. The fact that the writer has had to put up with the condition from childhood has made him take more than a casual interest in this aspect of the malady.

The pathology is not very clear; how much credit has to be given to the blood state in the causation of this patchy congestion? It is clear that this factor is something to be reckoned with, for everyone has had experience of chilblains improving under the exhibition of salts of calcium. However, it would appear in the light of what follows that it is a vasomotor disturbance with a curious patchy distribution and the facts of the nature of that distribution need a little consideration. The parts most affected are the dorsal aspects of fingers and toes and the margin of the external ear, while the tip of the nose, the outer aspect of the fifth metatarso-phalangeal joints and the internal posterior and external aspects of the heel are more rarely attacked. At all these points there is a minimum of subcutaneous fat, the skin tendon and sheath being practically the only covering of the bone or cartilage. These considerations led the writer to hope that any method of congesting the parts would relieve the condition and for that reason Bier's congestive treatment was tried in 1908. The congestion was obtained by means of applying a few turns of a 6·25 centimetre (two and a half inch) rubber band just below the knee or just above the elbow; this bandage applied over a stocking or underwear with just enough tension to be felt but not to cause pain, gave relief and after continuous wear twenty-four hours in the day would clear up the most obstinate crop of chilblains. The only

untoward consequence is that of possibly accelerating the development of varicose veins in the leg.

After Mr. A. F. Maclure[1] published his astonishing results of the treatment of chronic ulcers and like conditions by the application of direct elastic pressure to the lesions through the medium of rubber sponges and toy balloons combined with free movement, new ground was broken and his suggestion that elastic pressure be applied to the chilblain was acted on this winter; "don't allow them to swell" was his characteristic remark. The means of applying the pressure presented many practical difficulties which the writer set out to overcome. The success of the treatment has been so dramatic that he does not hesitate to bring it under notice at this early stage.

Without elaboration of details and repetition of Maclure's foundation principles it should be realized that the elastic pressure supplied by these various means acts in conjunction with muscular movement and with the pulsation of the arteries as an ever present masseur which keeps the blood and lymph in these areas on the move and so the lesions are cleared up.

Laying aside details of the writer's earlier methods of applying the pressure by means of crêpe rubber, thin sponge rubber and thin sheet dental rubber, the surgical glove finger seemed the most likely article to serve and finally the Dunlop Rubber Company made some pure gum rubber tubing of the weight of medium surgical gloves and varying diameters (fifteen, eighteen and twenty-one millimetres). This tubing can be made to order in a few days if the required diameters are given. From this tubing which of its nature is not long lived, there are cut lengths of 1·8 to 2·5 centimetres (three-quarters to one inch) as required and the band so obtained is stretched over the affected part at the greatest thickness of the part. A sock is then put on and the band stays in place whether the sufferer is walking or at rest. The hands are best treated by the use of rubber gloves at night only, but these gloves must fit firmly. The relief from the itching and throbbing is instantaneous and after a few days the part is normal in appearance save for a little desquamation. The pressure must be firm, but not painful. The outer aspect of small toes at the metatarsal joint can be treated by the cuff of the rubber glove worn round the foot or by a thin piece of sponge rubber held firmly in place by a piece of sticking plaster. The ears present a difficulty not yet overcome, but a surf bathing cap might be worn at night.

Simplicity in the application of the pressure being now obtained, it is hoped that many will try the treatment of obstinate cases along these lines. The old operating gloves will do well for many experiments and it should be borne in mind that the breaking of the skin does not preclude the use of the method. Simply sterilize the area, dust with boracic powder, cover with a thin piece of lint and apply a band over this. The "chilblain cures," paints, pastes and so on are mainly futile, as they do not attack the lesion as it should be attacked and too many cases are known in which such old time remedies are absolutely useless. The bands are worn more or less continuously as required, three days sufficing to banish all swelling.

This preliminary note is based on personal experience and on that of a few closely observed cases and while leaving something to the ingenuity of the individual, is nevertheless on sound lines and should stimulate a thorough trial. The method is so simple that even the apparatus could not be exploited by anyone and it allows the normal life of the subject to be free from interruptions consequent on this condition.

Reference.

[1] Fay Maclure: "Chronic Ulcer of the Leg," The Medical Journal of Australia, January 9, 1926, page 29.

MENDEL AND GENIUS.

By G. H. Taylor, L.R.C.P., L.R.C.S. (Edinburgh), *Sydney.*

In periods of acute cerebration the mental processes of an educated and talented mind may elaborate the incidence of the thought newly presented to it. This elaboration is, however, of secondary grade in the classification of thought value. The seed thought of genius when planted in suitable soil ultimately secures its full development. In selecting from medical knowledge the mind which has the highest claim to genius I regard Mendel from a purely intellectual standpoint, as having the highest claim. In Mendel's law the seed thought lay fallow for many years, when having found suitable nidus in the minds of talented men, it slowly flourished and not only now has it a great economic value in life, human, animal and vegetable, but it has perhaps more effect on modern intelligence than any thought given to life within modern memory. Mendel was a priest with few of the advantages which the modern scientist possesses and he has given a wonderful gift to life, the irony of which is that its practical application is destructive in a degree to some of the tenets of his faith. Apparently he was a man of simple and direct mind as many of the first grade intellects are. The mind of such a man with its servant centres of brain is able to concentrate with such of its centres as are most efficient in its creative work. In contrast to the work of Mendel another more popular and great genius is Pasteur. It will be noted, however, that the clinical evidence that preceded the original findings of Pasteur, *id est* the dreadful mortality in surgical cases from sepsis was obvious to every surgeon and moreover Pasteur could not have completed his original work without the assistance of a microscope. Mendel had no such assistance; he deduced his law from natural phenomena—in both, however, the seed quality of the thought required its development in other minds, in order to give it a practical value to life. The captains and kings, the statesmen and trade giants, will pass into the night, but the gift of Mendel to humanity may aid

in the discovery of a supreme energy as a great first cause, if it is ever to be known—and as far as the mind of man can peer into the future he will have life as long as thought persists.

Reports of Cases.

TWO CASES OF GONOCOCCAL SEPTICÆMIA.[1]

By A. H. Tebbutt, D.S.O., V.D., B.A., M.B. (Sydney), D.P.H. (Oxon.).

Director of Pathological Department, Royal Prince Alfred Hospital, Camperdown, Sydney.

During the past six months gonococci have been cultivated from the blood during life in two patients at the Royal Prince Alfred Hospital. Both succumbed and came to autopsy. Bacteriological proof of this form of septicæmia is sufficiently rare to warrant a short report.

Case I.

A male, aged twenty-eight years, contracted a urethral discharge which was diagnosed on clinical grounds as gonorrhœa. After about a week he again visited his local doctor who considered the local condition to be improving. About this time there were some pains in the joints. On the following day he noticed spots on the skin and a day later became very ill and was sent to hospital. On admission he was very dyspnœic, was spitting blood into his handkerchief and presented numerous petechial hæmorrhages and ecchymoses in the skin. He lived only two hours, but a blood culture and count were obtained by Dr. Woodhill; also the coagulation time for venous blood at 37° C. was found to be prolonged to seven minutes. The blood presented a remarkable picture: The red cells were 3,900,000 and hæmoglobin 70%, but the leucocytes numbered 110,000 per cubic millimetre, a figure which I have never seen apart from the leuchæmias. The stained blood films were exceedingly interesting, the differential count being as follows:

Neutrophile cells	37·2%
Eosinophile cells	1·3%
Basophile cells	0·6%
Small lymphocytes	3·3%
Large mononuclear cells (including transitionals and probably large lymphocytes)	15·3%
Myelocytes—	
Neutrophile	36·0%
Eosinophile	1·3%
Basophile	5·0%
	100·0%

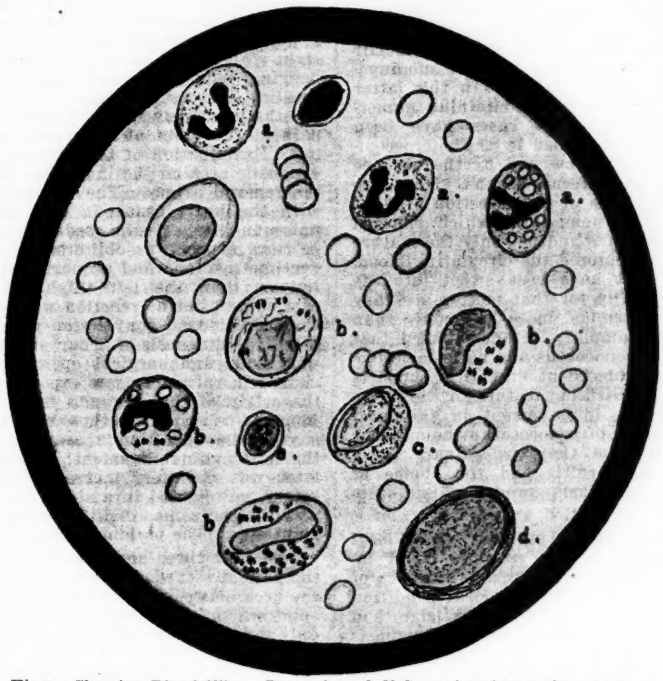

Figure Showing Blood Film. Bean shaped diplococci and vacuoles are seen in various leucocytes. Note myelocyte (*c*) and myeloblast (*d*).

There was some anisocytosis, but no poikilocytosis or polychromasia. There were a few normoblasts and megaloblasts. Many neutrophile cells and also cells of the mononuclear group contained vacuoles and also bean-shaped diplococci which were afterwards considered on the evidence to be gonococci (see accompanying Figure). Blood platelets were not seen. The peroxidase reaction was given by nearly all the leucocytes.

Subcultures from the plain broth to which venous blood had been added, gave a small number of discrete translucent colonies of a Gram-negative diplococcus, morphologically resembling the gonococcus and forming a viscid emulsion in normal saline, a character I have seen before in some gonococcal cultures.

The autopsy revealed the following main features: Numerous dark purpuric spots and ecchymoses over the trunk and limbs; the right knee joint contained a gelatinous semi-fluid, turbid exudate in which intracellular and extracellular Gram-negative diplococci were found in moderate numbers; strange to say, there was no injection of the synovial membrane. The left knee joint contained a serous fluid, somewhat viscid, but no pus cells or diplococci. There were petechial hæmorrhages under the visceral pleura and the epicardium. There was no endocarditis. The spleen was enlarged; it weighed four hundred and fifty grammes (fifteen ounces), was of elongated type and on hemisection showed a soft red cut surface in which the malphigian bodies were not visible. There was no infarction, but a very few hæmorrhages. The liver was enlarged; it weighed three thousand grammes (one hundred ounces) and was of a yellow colour with a slightly irregular surface. Microscopically it showed marked fatty infiltration and a definite periportal cirrhosis. No enlarged lymph glands were to be found and a smear from the anterior part of the urethra did not disclose any gonococci. The bone marrow of the right tibia showed no abnormality to the naked eye and films and sections did not manifest any hyperplasia. A head examination was not permitted.

Case II.

A female, aged thirty-four years, had been an in-patient with gonorrhœal endocervicitis two months before her death. Her baby had *ophthalmia neonatorum*. She had not looked well at this time. Then she was treated as an out-patient, but developed œdema of the legs and was readmitted. There was still some discharge, her skin had a yellowish tinge and showed a rash fading on pressure (Wassermann reaction not present). There were blowing systolic murmurs at apex and base; the systolic blood pressure was 100 millimetres of mercury and the diastolic 60 millimetres; there were albuminuria, anæmia (3,000,000 red cells and only 40% hæmoglobin) and leucocytosis (18,400), with 81% polymorphonuclear cells. A subacute endocarditis was suspected and two blood cultures made, the second being successful and the gonococcus

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on June 10, 1926.

was the organism. Emulsions gave satisfactory agglutination with antigonococcal sera. This patient died three weeks later in spite of various forms of specific therapy.

The autopsy was done by Dr. V. R. Woodhill and showed mainly normal features. There were no vegetations on the heart valves. The heart musculature was red and soft and polynuclear leucocytes were found between the muscle fibres. There were some small hæmorrhages under the endocardium particularly on the septum. Definite evidence of an old peritonitis was present in the form of fine filmy adhesions between the abdominal viscera. The liver and spleen were slightly enlarged and there appeared to be some hæmorrhages in the liver substance. The uterus and tubes showed thin but firm adhesions. No obvious lesions of the cervix and uterus were present. Microscopically the tubes showed the after effects of a salpingitis, but there was no evidence now of acute inflammation.

Comment.

The first patient was admitted as suffering from *purpura hæmorrhagica* and the condition appeared to me at autopsy, before the bacteriological findings were known, to be most probably acute myeloid leuchæmia and as Dr. Sinclair Gillies observed, the acute septicæmic type of meningococcal infection had to be considered. We saw this latter type in Egypt in 1916, the blood films containing numerous meningococci and a number of cases have been reported. Acute leuchæmia is excluded by the microscopical examination of the bone marrow and by the absence of leucocytic infiltration of the internal organs. I hesitate to suggest that the dissemination of the infection brought about a very strong positive chemiotaxis which emptied the bone marrow of its leucocytes and not only the mature cells but also the myelocytes entered the circulating blood. Could the nucleated red cells have been swept into the circulation in this crisis? Why for that matter are they so commonly found in leuchæmias, more commonly than in pernicious anæmia for example? I am satisfied that the organism isolated was a gonococcus and not a meningococcus and the fact of the antecedent urethritis supports the bacteriological evidence. Striking features of this very malignant infection were the improvement in the local condition, the apparent absence of gonococci in the anterior part of the urethra *post mortem*, the extraordinary leucocytosis, the absence of endocarditis and the choice of synovial membrane for metastasis producing a quite unsuspected septic focus.

The second case is an example probably of a local gonococcal infection giving rise to a chronic blood infection which led to a fatal issue without any evidence of endocarditis or metastases and again the local condition appeared to have greatly subsided. The physician had apparently sufficient evidence to make a clinical diagnosis of infective endocarditis, but none was found, the myocardium being the site of the damage to the heart. No joints were examined at autopsy and it is just possible that unsuspected metastases existed therein as in the other case.

In a review of this subject by Rufus Cole in Osler's "Modern Medicine" of twenty-nine septicæmic cases bacteriologically proved, eleven manifested endocarditis, but as only nine of these patients died, it seems doubtful in the light of our second patient whether the two patients who recovered did have endocarditis and in any of the nine patients not coming to autopsy the condition is likewise doubtful. The remainder of Rufus Cole's summary (eighteen cases without endocarditis) are made up of six cases with metastatic abscesses, three fatal, ten cases without metastases or only mild metastases, all recovering and two cases of gonococcal puerperal septicæmia; in one of these, possibly two, recovery occurred. In the same work we find also that at the Johns Hopkins Hospital, of one hundred and seventy-six cases of infective endocarditis in which the organism was determined, in no less than 20 or 11·3% the gonococcus was incriminated. Francis Blake is of the opinion that temporary gonococcæmia undoubtedly occurs in local gonococcal infections characterized by arthritis and synovitis.

Acknowledgment.

I have to thank Dr. Sinclair Gillies and Dr. Clement Chapman for their kind permission to extract from their case records and Dr. V. R. Woodhill for his prompt bacteriological diagnosis.

ARTERIAL ANEURYSMS.[1]

By ARCHIE ASPINALL, M.B., Ch.M. (Sydney),
Honorary Surgeon, Sydney Hospital.

F.S., a male, aged twenty-seven years, was admitted on September 28, 1922, under the care of the late Sir Herbert Maitland. The history given on the day of admission was that ten days previously he had noticed pain and numbness in the right shin bone which gradually got worse and prevented him from walking. Three days later a pulsating swelling appeared on the inner side of the right thigh. This was accompanied by a continuous nagging pain The pain became more severe and the swelling increased in size. The patient noticed for two months previously that if he exerted himself, he got severe pain at the point of subsequent appearance of the swelling. Examination of the swelling revealed a large diffuse expansile area on the inner side of the thigh in the line of the femoral artery. The swelling pulsated synchronously with the heart beat. It was tender on palpation. The pulse in the *dorsalis pedis* artery and in the *tibialis posticus* artery was obliterated. The right thigh was 3·1 centimetres (one and a quarter inches) greater in circumference than the left thigh. A Wassermann test was carried out, but no reaction was obtained. X ray examination revealed no bony lesion of the right femur or of the pelvis. A diagnosis of aneurysm of the right femoral artery was made and surgical operation was undertaken. The right femoral artery was exposed and doubly ligated above the origin of the *profunda femoris* artery; its walls were found to be as thin as those of a vein. On the night of the day of the operation a swelling was noticed just below the left inguinal ligament; it was pulsatile and five days later was definitely increased in size. The left femoral artery was ligated in a similar way to the right, its walls were in the same condition as those of the artery on the right side. The patient made an uninterrupted recovery.

Just over three and a half years later, on July 13, 1926, the patient returned to hospital with a pulsating tumour in the area between the umbilicus and the right superior iliac spine which he had noticed only three days previously. The only symptoms complained of were pain in the right knee and in the small of the back. A Wassermann test was carried out, but no reaction was obtained. No bony lesion was found in the pelvis on X ray examination. A diagnosis of aneurysm of either the common or external iliac artery was made.

The patient was operated upon on July 30, 1926. An incision was made in the midline of the abdomen. The bifurcation of the abdominal aorta and the common iliac artery on the right side was identified by drawing the caecum to the midline after incision of the peritoneum overlying the right iliacus muscle. Aneurysm of the external iliac artery was seen extending up to the point at which the internal iliac artery arose. The right common iliac artery was ligatured with thick chromacized catgut. Here also the walls of the artery were found to be no thicker than those of a vein. On the left side a bulging of the left external iliac artery could be felt just above the site of ligation three and a half years previously. The leg was wrapped in cotton wool and the patient returned to the ward where he progressed favourably. He has had no pain or discomfort whatever in the right leg since the operation. The patient is about 1·75 metres (five feet, ten inches) in height and weighs

[1] The patient described herein was shown at a meeting of the New South Wales Branch of the British Medical Association on August 12, 1926.

about seventy-six kilograms (twelve stone). He has suffered from no serious illness, but is rather pale. A full blood count showed slight secondary anæmia. The vermiform appendix was removed, as it showed slight inflammation. Curiously enough pathological examination of the appendix revealed early new growth (malignant).

Reviews.

IN MEMORY OF OSLER.

"THE Bulletin No. IX. of the International Association of Medical Museums and Journal of Technical Methods" is to hand. This volume, published under the auspices of the International Association of Medical Museums, consists of appreciations and reminiscences of Sir William Osler and is styled "The Sir William Osler Memorial Volume."[1] The original intention of the Medical Museums Association, an organization which had Osler's active interest and support from its inception in 1907, and of which he was the first honorary member, was "to present the relations of Osler to pathological anatomy and the influence of his pathological studies and researches especially of the early Canadian period upon his development as a clinician and medical teacher." But this purpose by a happy inspiration was expanded and modified by Dr. Maude E. Abbott, the energetic managing editor, so that now there is scarcely an aspect or period of Osler's life and work that has escaped attention in this volume. This fact will enable the future historian, when Osler's name and fame have become mere tradition, to reconstruct Osler's personality and paint a vivid and accurate picture of the late Regius Professor of Medicine at Oxford. Robert Burns thought it would be a great gift if we could see ourselves through the eyes of others, for then we should get a more or less accurate portrait of ourselves. Here we have a portrait of Osler as seen through the eyes of the world. In this volume there are one hundred and nineteen appreciative articles by eminent men who knew him intimately. The writers represent many of the nations of the world: Canada, the United States of America, England, France, Germany, Italy and other countries join in expressing their appreciation of the great physician. The articles, too, demonstrate the manysidedness of Osler's character. The contents of the volume consist of a frontispiece from a photograph presented by Lady Osler for publication in the book. This is followed by prefaces, editorials and general articles; then come biographical notices giving the life history of Osler from his earliest days till his death. All the contributions are excellent, but we shall quote from just one: "The Last Days," by J. George Adami, M.D., LL.D. In this essay we are given a rather remarkable example of prescience, clairvoyance or what not in the old janitor at the physiological laboratory. "We who thought we knew him intimately were more sanguine than those further removed. Walking with Sherrington after the service, I heard from him the story of the old janitor at the physiological laboratory: 'No sir, I don't think Sir William will get better. You see, sir, it is like this: You know how Sir William mostly on his way down to the hospital of a morning would drop in for a few minutes to see you and the rest. Well, in the old days, coming in, and likewise going out, he had always a word for me. You know his style, sir, like giving a man a cheery dig in the ribs. But now these last months I have noticed him greeting you quite merry-like; but in between whiles his face has been grave as though he had something heavy on his mind, and he has walked in and out without once noticing me. It is Mr. Revere, sir, and Sir William won't get better.' That old janitor had made the correct prognosis: he had observed more than did those of us who thought ourselves the children of light." Not the least interesting part of the volume are the concluding one hundred and fifty-five pages, which contain the "Classified and Annotated Bibliography of the Publications of Sir William Osler Bart., F.R.S., *etc.*" and a "Bibliography of writings about Osler." Osler's publications are "based on the chronological bibliography by Minnie Wright Blogg" and are "compiled, augmented and annotated by Maude E. Abbott" and others. The editors are Fielding H. Garrison and Henry W. Cattell, Washington. These bibliographies should be found helpful to the research student and the lover of Osler. A list of subscribers to the Publication Fund has been printed at the end of the book. The book is a well got up handsome volume and contains one hundred excellent illustrations, two of which—the photographs of Rev. W. A. Johnson, "Priest of the Parish of Weston," and James Bovell—are of particular interest, being the photographs of the men who were more than all else an inspiration to Osler. We agree with Professor Welch that "the present volume is an interesting and valuable addition to Oslerian literature." The Osler Memorial Volume should also act as "an appendix to Dr. Cushing's great biography" and supply "the unsmelted ore from which the future historian may extract that first hand evidence which may enable him to rightly estimate the service which William Osler rendered to his day and generation." Dr. Maude E. Abbott, of Montreal, deserves our congratulations; she has brought to a successful issue a piece of very difficult work.

[1] "Bulletin No. IX. of the International Association of Medical Museums and Journal of Technical Methods: Sir William Osler Memorial Number: Appreciations and Reminiscences; 1926. Privately issued at 836, University Street, Montreal, Canada. Royal 8vo., pp. 633, with illustrations.

OCCLUSION OF THE MESENTERIC VESSELS.

THE monograph by Mr. A. J. Cokkinis, entitled "Mesenteric Vascular Occlusion," should prove a useful addition to the present knowledge of a subject which has been regarded as practically a hopeless and therefore, unprofitable study.[1]

The book opens with a short study of the anatomy of the mesenteric vessels of the abdomen. A number of injection experiments was carried out in cadavers to demonstrate the degree of collateral arterial and venous drainage in mesenteric circulation and to study the effects of experimental occlusion of the main vessel and of various branches. The results obtained showed that the collateral circulation in the mesentery itself is very free and the only block which is of serious consequence, is that of the main vessel high up or of the terminal branches. Here, there is no anastomosis either between the *vasa recta* in the mesentery or between the ramifying vessels on the gut wall.

Cokkinis points out that the most frequent form of arterial occlusion of the mesenteric arteries is embolism and the thrombosis that follows, is merely a pathological incident, primary thrombosis being rare.

In considering the pathology of mesenteric embolism and thrombosis the author deals fully with the changes in the gut and mesentery. Free fluid in the abdominal cavity, either clear or blood-stained, was found in forty of the seventy-six cases collected and is a factor to be remembered in the diagnosis of this condition.

The chapter on clinical manifestations when he endeavours to place this condition as a clinical entity, capable of being diagnosed from other acute abdominal catastrophes, is not convincing. When a typical picture presents, which the author admits is certainly rare, diagnosis becomes possible.

The use of a high enema with resulting dark, blood-stained return when mesenteric occlusion is suspected, should prove of diagnostic value, but the most helpful fact in diagnosis is the history or signs of a causative lesion, such as disease of the heart or vessels, pyæmia and portal obstruction by any cause. The author lays stress on the fact that, in common with all other acute abdominal conditions, the early diagnosis and immediate operation are the only hope for success. When resection has been carried out within twelve hours of onset the condition was far from hopeless. For success bold resection of the gut with mesentery must be performed before the spreading secondary thrombosis has occurred.

The book closes with the notes of seventy-six collected cases, including the two which came within the author's experience.

[1] "Mesenteric Vascular Occlusion, Supplemented by an Appendix of Seventy-six Original Cases," by A. J. Cokkinis, M.B., B.S. (London), F.R.C.S. (England); 1926. London: Baillière, Tindall and Cox. Demy 8vo., pp. 171. Price: 10s. 6d. net.

DENTAL RESEARCH IN THE AUSTRALIAN ABORIGINAL.

This first publication under the Keith Sheridan Foundation for Medical Research is a thesis entitled "Dentition and Palate of the Australian Aboriginal," which was presented by Dr. T. D. Campbell for the degree of doctor of dental science.[1]

After first briefly indicating the importance of such a study not only from the point of view of anthropology but also in connexion with modern dental problems such as those which occur in orthodontia and dental prosthesis, the author continues with a careful description of the material upon which his study was based. The total number of skulls examined was approximately six hundred and thirty. The number of teeth examined was about 10,500.

The geographical distribution is indicated statistically and by a map, most specimens coming either from South Australia within one hundred to two hundred miles radius of the mouth of the Murray or from the Northern Territory in and around Anson Bay and Melville Island. A few skulls from New South Wales, Western Australia, Victoria and Queensland were also examined.

In the case of the palate a special instrument was devised in order to obtain measurements.

The individual teeth are then carefully described and compared with the European and Japanese as regards their measurements.

As regards the pulp cavity an observation of considerable interest was made in regard to the deposition of secondary dentine. It was found that the reduction in size of the pulp cavity and deposition of second dentine in the later stages of wear of the teeth takes place not by the growth of dentine on the roof of the pulp cavity, but by a growth upon the floor near the roots of the teeth. The roof of the cavity is somewhat depressed by a deposit, but its initial outline is preserved and remains at a level relative to the cervical enamel margin strikingly constant compared with the elevation in the level of the cavity floor.

The dental index is then given and compared with that of other races and the Australian is very definitely megadont, the average of 86 indices being 46·13, an index which is exceeded only by the Tasmanians.

The author found no instance of poor development of the lateral upper incisor tooth such as is frequent in modern white people. In the case of the third molar several instances were met in which this tooth was completely absent. Supernumerary teeth are also carefully discussed and described. The shovel-shaped upper incisor which Hrdlička found to be typical of Mongolian and American Indian types was found to be by no means a characteristic feature of the Australians' teeth. The tuberculosis anomalus in the first molar was probably less frequent than in modern white people.

A great deal of very careful work upon the palatal form and development, the *tori palatini et cetera* is next described.

Dental arch contour figures both in the child and in the adult are also discussed. Certain peculiarities of the occlusion of the teeth are mentioned and one important observation is that the edge to edge bite is one which is attained only in the adult and that in the preadult skull the overhang bite prevails and, to quote the author's words:

> In any series of Australian skulls which includes sufficient specimens of varying ages, it can be seen that the presence of the edge to edge bite is associated with the occlusal wear the teeth have undergone; that is, a diminution in the cusp height of molars and premolars is accompanied by an apparent shifting forward of the lower anterior teeth relative to the upper anterior.

The author also deals with the eruption of the teeth and he remarks that the upper first permanent molars and central incisors erupt at about the same time.

As regards the glenoid fossa it was found that it increases in depth from infancy to old age and that mastication as indicated by much worn teeth does not necessarily produce a reduction in the depth of the fossæ—a conclusion contrary to the opinion recorded by Sullivan. The author was unable to find a mandible exhibiting a mandibular torus which is of interest since Hrdlička thought that the torus was undoubtedly of functional origin. The gnathic index was also measured and the young were found to be mesognathous while young adults and adults were prognathous. The method and degree of occlusal attrition is also carefully described and a feature especially well seen in Australian skulls is described, namely, a change of occlusal plane as we pass from the first molar to the third molar.

The percentage of carious teeth is also very fully discussed and was found to be about 1·58% of the 10,500 teeth examined. No carious teeth were found amongst the skulls of young children.

The food of the aboriginal is briefly mentioned. Certain customs in which one or more teeth are removed are very fully outlined and the geographical distribution of these customs also given. One of the most interesting chapters is that in which the dentition of the aboriginal is compared with that of extinct and fossil types of man and in order to facilitate this comparison the palates of a typical Australian aboriginal, of the Talgai skulls, of the Gibraltar skull, of the reconstructed Heidelberg skull, of the Piltdown, of the La Chappell skull, of a bronze age European and of the Tasmanian are all plotted on squared paper and the eight palates placed side by side on the one plate.

In a final brief summary the author concludes that the teeth of the Australian aboriginal are probably larger than those of any other living race. In crown, form, cusp number and root form they are exceedingly primitive, probably more so than in any other living race and also more than in some extinct races such as the Tasmanians and Neanderthal races. The palate does not possess the somewhat circular form attributed to Neanderthal man but presents the more primitive contour with parallel sides. The Australian dentition was strikingly free from developmental aberrations and dental diseases, the latter as represented by such universally occurring affections as caries, alveolar abscesses and periodontal lesions, were conditions almost entirely limited to old age. The observations show in every aspect a very pronounced difference between the well-formed Australian dentition and the ill-formed disease-stricken masticatory outfit with which most modern civilized people are burdened.

[1] "Dentition and Palate of the Australian Aboriginal," by T. D. Campbell, D.D.Sc.; Issued by the University of Adelaide; 1925. Adelaide: The Hassell Press. Crown 4to., pp. 123, with illustrations.

A BOOK FOR MOTHERS.

"Advice to the Expectant Mother on the Care of her Health," by Dr. F. J. Browne, Professor of Obstetric Medicine in the University of London, and Director of the Obstetrical Unit at University College Hospital, London, is a small book full of common sense and wise precautions.[1] As the title suggests, it is intended for expectant mothers, but it could be read with interest by members of the medical and nursing professions.

It is very simply and clearly written and important advice stands out in large type. It differs from most treatises on the same subject in its brevity.

In the foreword the author pays a glowing tribute to the pioneering work in antenatal care of the late John William Ballantyne, of Edinburgh.

In the opening chapter, "Benefits of Antenatal Care," the author, when speaking of eclampsia, declares: "This disease can be entirely prevented by proper antenatal care." Apart from this statement there is nothing new or contentious in its pages.

The closing chapter is devoted to hints on breast feeding and the advice, though simple, is very sound.

Practitioners need have no hesitation in recommending this book to expectant mothers.

[1] "Advice to the Expectant Mother on the Care of her Health," by F. J. Browne, M.D., D.Sc., F.R.C.S.E.; 1926. Edinburgh: E. and S. Livingstone. Crown 8vo., pp. 40. Price: 6d. net.

The Medical Journal of Australia

SATURDAY, OCTOBER 2, 1926.

Industrial Hygiene.

The medical professional in all parts of the world has had a serious problem to consider during recent years and must soon decide whether it is prepared to lead or to follow. It has been proved that by the adoption of modern methods in industrial and factory life the health and happiness of the worker can be very greatly enhanced and incidentally his efficiency can be improved. When measures for the hygienic regulation of workers and workshops were first discussed, the two groups of persons concerned, the employers and the employed, looked suspiciously at the proposals. Employers are usually disinclined to increase overhead expenses unless there is an obvious return for the added cost. The employer looked upon the claims made for these measures as admirable on paper, but he was not convinced that they would prove in practice to be sound. It was to his mind unbusinesslike to expend money voluntarily on converting a factory or workshop into a drawing-room and he disbelieved in the contention that there would be an increased output as a result of a business run on lines dictated by preventive medicine. The worker was suspicious. He feared that medical examination to ascertain whether or not he was fitted for his job might result in his losing it. He distrusted the programme that promised to increase his output; if the employer regarded this plan with favour, it could not be acceptable to the employee. The medical profession as a whole had no experience of industrial hygiene at first and therefore expressed no opinion. But the principle was so sound that within a few years a handful of large firms produced irrefutable evidence of its practicability. Little by little the old system of employing a medical practitioner to prescribe for any worker who was indisposed during the hours of labour, became discredited. Today there are many who realize that it pays the employer to adopt the methods of modern industrial hygiene. In spite of this in Victoria and probably in all other Australian States few industrial firms are prepared to engage a medical practitioner for more than an hour each day to carry out this work.

There appears to be some confusion in regard to the functions of the industrial medical officer. He is not a factory inspector and has no concern with the legislative requirements dealing with factories or workshops. His duties are to control the environment of the workers in order that noxious elements may be excluded and that the worker may be employed in comfortable and pleasant surroundings. In the next place he has to ascertain the special hazards of the particular trade or craft and to adopt measures that will reduce those hazards to a minimum, if they cannot be removed. His third duty is to acquaint himself concerning the physical and mental qualities of each worker and to advise the proprietor or manager if any employee is unsuited for the particular occupation that he is following. It is usually possible to find a place suitable for any worker in a large industrial establishment, no matter what may be his physical disability. He can do much in this connexion by influencing the worker to adopt a frame of mind in his employment that makes for contentment and pride of work. He has further to keep a control on the hours and other conditions of labour, so that undue fatigue may be avoided and so that the work itself may not become a contributory factor in the production of ill-health. He must watch for infective processes among the workers, in order that the infection may be controlled before it has a chance of spreading. Lastly he must be prepared to act in the capacity of medical adviser to the management with the object of rendering the place of employment a healthy, comfortable and congenial place and of maintaining physical fitness and contentment of the members of the staff. How can all these duties be adequately performed in one hour a day in an establishment containing hundreds of employees?

The Federal Committee has concerned itself with the rate of remuneration of industrial medical officers. But it has not taken the first step in dealing with the question of the maintenance of the

health of the workers. If the medical profession will recognize that the application of the principles of industrial hygiene depends to a large extent on its enthusiasm in commending them, the public will soon demand that every industrial undertaking must make provision for the adoption of adequate measures of preventive medicine. If the medical profession manifests indifference and a want of understanding, it may be long before Australia emerges from the stage of the hour a day programme. Experience teaches that a full measure of success will be attained only if the system is developed on a voluntary basis encouraged by enthusiastic practitioners who have mastered the subject. But there will be no general enthusiasm among medical practitioners unless the profession can be induced to accept the rôle of leader in the reform.

Current Comment.

THE KOTTMANN TEST IN THYREOID DYSFUNCTION.

In June, 1922, attention was drawn in this journal to the Kottmann test for thyreoid dysfunction in connexion with some work by Petersen, D'Houbler, Levinson and Laibe. The findings of these investigators seemed to justify the conclusion that a sphere of usefulness would be found for the test in the elucidation of thyreoid problems. The test is performed by exposing to light of a fixed intensity a photographic plate in which blood serum takes the place of gelatine. A solution of hydroquinone is applied to the plate and the colour changes are noted. Silver iodide is reduced to free silver and a brown colour appears. It is held that in the presence of hyperthyreoidism the change of colour is delayed. The delay is occasioned by the presence in the blood serum of a colloid which protects the colloidal silver iodide and maintains the silver salt in the form of a suspension of fine particles. In the ripening process connected with the preparation of the plate the colloidal particles of the silver salt become larger and more photosensitive. When the hydroquinone is added, the reduction to free silver proceeds at a rate inversely proportional to the fineness of the particles.

Further investigations on the value of the Kottmann test have recently been carried out by Dr. Ichior Katayama.[1] Dr. Katayama investigated the glucose tolerance, the basal metabolism and the response to the Kottmann test in one hundred and one patients who were suffering from hyperthyreoidism and other pathological conditions.

[1] *The American Journal of the Medical Sciences*, July, 1926.

The first group comprised twenty-one patients with clinical evidence of dysfunction of the thyreoid gland. No parallelism was observed between the lowering of the tolerance for glucose and the basal metabolic rate in these patients. This finding is similar to that of other observers. Dr. Katayama points out that no parallelism was expected. No correspondence was found between the basal metabolic rate and the response to the Kottmann test. In this series the Kottmann test was carried out only in connexion with those patients in whom the urea nitrogen, uric acid and chloride content of the blood were normal. In eight instances the response was normal, in three retardation was slight and in ten it was pronounced.

The condition of twenty patients with epilepsy was studied. The response to the Kottmann test in these individuals varied from an acceleration to a definite retardation of change of colour. No correspondence was found between the response to the Kottmann test and the glucose tolerance and basal metabolic rate. It was, moreover, impossible to demonstrate any relationship between the response to the Kottmann test and the frequency or severity of the seizures.

The third group included fifteen patients suffering from psychoneurosis and thirteen whose chief complaint was severe headache of unknown origin. In the majority the blood sugar and the urinary sugar curves obtained after the administration of glucose were normal and the variations in the basal metabolic rate were as a rule within normal range. The response to the Kottmann test, however, varied between normal and strong retardation.

A fourth group was made up of thirty-two patients some of whom were normal and some of whom were suffering from miscellaneous mental conditions. Eight of these gave a normal response to the Kottmann test, in four acceleration was noted and in four retardation. No correspondence was found between the glucose tolerance, basal metabolic rate or the response to the Kottmann test.

In considering the results of Dr. Katayama's investigations it must be remembered that the estimation of the basal metabolic rate is regarded as the most reliable means of determining abnormality of thyreoid function. If the response to the Kottmann test were an indication of thyreoid dysfunction, it would be expected to produce results more or less parallel to those obtained by estimation of the basal metabolic rate. Dr. Katayama's results are opposed to those of the four workers to whom reference has already been made. Both sets of observations cannot be correct. Further work will probably reveal the truth. In the meantime it will probably be safer to agree with Dr. Katayama and to regard the diagnostic value of the Kottmann test as dubious. This attitude need not prevent speculation as to its general significance. It will be remembered that according to the recent work of Williamson and Pearse hyperthyreoidism is a manifestation of the predominance of what they call "the secretory phase" of thyreoid activity. They thought that early Graves's disease is a disorder of the function over which the thyreoid gland presides. In

other words the demand for thyreoid secretion arises outside the gland in some abnormal state or condition which is usually controlled by the thyreoid. It is not unlikely that the ultimate cause rests in some variation in the colloidal state of particular cells of the organism. It will also be seen that many of Dr. Katayama's observations were made in patients suffering from conditions which might reasonably be supposed to be due to some similar colloidal variation. This would imply that the Kottmann reaction depends on some biophysical state and that this state plays a variable part in more than one pathological condition.

ATROPHIC RHINITIS.

Atrophic rhinitis is one of the most obstinate conditions that the rhinologist is called upon to treat. In its less severe form the condition is one of simple atrophy accompanied by the formation of crusts on the nasal mucosa. In these circumstances it calls for continuous care and attention on the part of the patient and the results of treatment do not bring much satisfaction to the surgeon. In its most advanced form, known as ozæna, the atrophy and crust formation are accompanied by a most objectionable smell. This is noticed as a rule only by the patient's neighbours and leads practically to his social ostracism, by a merciful providence his own sense of smell has been abolished.

The views as to the causation of this condition are many. Its occurrence in nasal cavities of unduly large dimensions and the fact that it has followed operations associated with extensive removal of intranasal tissue, have led to the postulation of an anatomical basis. Syphilis has been proved to be the underlying cause in some instances and the association with infection of the accessory sinuses has led others to regard bacterial infection as the *fons et origo mali*. Lastly, as would be expected in a condition of such uncertain ætiology, endocrine abnormality has been hailed as the only possible explanation.

The subject of atrophic rhinitis has recently been discussed by the Section of Laryngology of the Royal Society of Medicine.[1] The discussion was opened by Mr. W. M. Mollison in a masterly review of the different theories of causation. He referred to the work of many of the protagonists of all three views, the anatomical, the infective and the endocrine. He referred to the three organisms that have been regarded as specific, namely the pseudo-diphtheria bacillus, the Löwenburg-Abel bacillus and the Perez bacillus and he gave prominence to the suggestion of Perez that "every case of ozæna starts from another case of ozæna or from the nose of a dog." His own opinion is in favour of the endocrine theory. He concluded by saying that unfortunately cases occur which will undermine any theory.

Sir St. Clair Thomson asked whether the recognition of syphilis and sinusitis had resulted in the weeding out of a certain percentage of cases of atrophic rhinitis. He has been struck by the fact that the removal of every trace of terminal bone by Moure's operation is not followed by ozæna. He believes that in addition to damage to the turbinate bone added infection is necessary.

Mr. J. F. O'Malley holds that the ozæna of syphilis and tuberculosis can be excluded, because in the presence of either of these some characteristic lesion can usually be found. His view of the condition has been built up by analogy with *lupus erythematosus*. In the latter condition there is a heaping up of dead cells and crusting and when these disappear there is destruction of tissue. Mr. O'Malley has applied to atrophic rhinitis the findings that in *lupus erythematosus* hæmatogenous infarcts occur. The bilateral distribution and the tendency to occur in early life constitute a good analogy between the two. If this view is correct, the site of the septic focus in Mr. O'Malley's opinion is not a very material point. The vascular supply determines the bilateral distribution and then tissue reaction and necrosis are followed by secondary infection.

Dr. W. S. Syme said that he looked at the question from the evolutionary standpoint. He is favourably impressed with the view that the parts of the body which are formed late in development, are more apt to degenerate under stress than others. In mammalia the nose is the latest arrival in evolution and the body cannot always adapt itself to cope with the stress of modern life. This is especially true of the female sex in whom atrophic rhinitis is commoner than the male. Races in their primitive state are free from atrophic rhinitis, but this condition makes its appearance when they pass under the influence of civilization. In Dr. Syme's opinion this harmonizes with the endocrine theory because endocrines provide the stimulus which enable an individual to cope with modern conditions. He does not regard the condition as being inflammatory and due to the activities of a particular organism. He does not think that infection occurs first and is followed by atrophy; he regards atrophy as being a primary occurrence. He pointed out that it must be very rare for unilateral atrophic rhinitis to occur.

Sir James Dundas Grant said that he had had experience of cases which seemed to illustrate all the ætiological factors. He also quoted cases in which the bacillus of Perez had been found on bacteriological examination and in which the bacillus had disappeared after the use of vaccines, though the symptoms did not always do so.

Although this condition is gradually becoming rarer, this discussion in regard to its ætiology is of importance. The majority of those who took part, seem to favour the existence of an endocrine abnormality for its establishment. It seems difficult and almost impossible to dismiss the question of bacterial infection. But little reference was made to experimental observations on this condition. The suggestion of Mr. O'Malley that work should be undertaken and that an attempt should be made to isolate organisms from patients with atrophic rhinitis, particularly from the deeper layers of the tissues, is worthy of consideration. There is no reason why any of these theories of causation should be accepted to the exclusion of the others. It is far more likely that they are interdependent.

[1] *Proceedings of the Royal Society of Medicine*, July, 1926

Abstracts from Current Medical Literature.

SURGERY.

Traumatic Neuritis of the Ulnar Nerve.

Harry Platt (*The British Journal of Surgery*, January, 1926) in discussing the pathogenesis and treatment of traumatic neuritis of the ulnar neve in the postcondylar groove, states that this nerve is at this particular spot in a position of extreme vulnerability and is liable to injury of various degrees which may produce neuritis. The special injuries discussed by the author are: (i.) The ulnar nerve lesion associated with recent fractures of the lower end of the humerus; (ii.) late ulnar nerve involvement after fractures; (iii.) recurring dislocation of the ulnar nerve. All these may cause a traumatic neuritis, although fortunately nerve injury is but rarely a complication of ordinary fractures. Of the nerve injuries associated with fractures of the lower end of the humerus 60% involve the musculospiral nerve and 25% the ulnar nerve. The nerve lesion is primarily a contusion; the symptoms are slight and spontaneous recovery tends to occur. The lesion may persist and pass into the secondary class of neuritis which is generally due to friction or tension on the nerve caused by disturbance between the normal relation of the nerve and its bed. The author holds that in all these persistent and severe cases the nerve trunk should be explored and displaced to a new bed in front of the internal condyle. The clinical features of late ulnar palsy are briefly as follows: The fracture occurs generally in early life (two to ten years) and more frequently in the male sex, *cubitus valgus* resulting and distorting the joint more and more as adult life is reached. In 75% of cases the interval between injury and the onset of symptoms is not less than ten years and in some cases up to thirty years. The neuritis begins insidiously and progresses steadily, the pain due to the sensory disturbance or the paresis and wasting due to the motor disturbance predominating in different instances. In long standing cases complete ulnar palsy with all its mechanical sequelæ may be seen. The treatment affords little scope for conservative nonoperative methods. Operative treatment may be divided into four types: Neurolysis, gouging out of the postcondylar groove, supracondylar osteotomy and lastly anterior transposition of the nerve (displacement-neurolysis). Of these the two latter only are worthy of notice, the supracondylar osteotomy presenting more difficulty than simple anterior transposition. This latter operation comprises generous freeing of the nerve above and below the elbow, freeing of the proximal branches of the nerve, the preparation of a new nerve bed situated deeply in an intramuscular plane and resection of part of the intermuscular septum, if this kinks the nerve. In the author's hands this is the most suitable operation, is universally applicable and has proved an unqualified success.

Congenital Inguinal Hernia and Abnormally Placed Testes.

Richard H. Hunter (*The British Journal of Surgery*, July, 1926) gives his views of the ætiology of congenital inguinal hernia and abnormally placed testes. The testis, *processus vaginalis*, *gubernaculum testis* and the fascial coverings can be lifted out of the scrotum of the newly-born without anything but a little superficial connective tissue being torn. The gubernaculum is not attached to the skin of the scrotum and the testis cannot be drawn down from the abdominal cavity by its contraction. The gubernaculum acts as a guide to the large growing cells which cause the growth of the *processus vaginalis*. The *processus vaginalis* developes as a cone shaped diverticulum of peritoneum and just before the descent of the testis its apex normally reaches to the point of junction between the anterior abdominal wall and the scrotum. During the descent of the testis the peritoneum which is adherent to the proper fibrous tunic of the gland, is drawn down into the scrotum. If the *processus vaginalis* is longer than normal before the testis descends, the excess of peritoneum present becomes folded upon itself and will form a hernial sac.

Duodenal Ileus.

Joseph E. Adams (*The British Journal of Surgery*, July, 1926) claims that duodenal ileus is an important condition. The indications are that chronic duodenal ileus may be secondary to gastroptosis alone. In the smaller number of cases it may be due to compression of the fourth part of the duodenum by the superior mesenteric vessels and the drag of the mesentery. It is doubtful how far duodenal ileus is a manifestation of general visceroptosis. The dilatation of the duodenum may affect primarily either the first or the third part. The appropriate treatment in most cases is duodenojejunostomy. In a few, however, there is so pronounced a kink at the junction of the first two parts of the duodenum that gastro-jejunostomy is likely to give the best results.

Multiple Polypi of the Colon.

W. I. de C. Wheeler (*The British Journal of Surgery*, July, 1926) writes that polyposis of the intestinal tract is not by any means so rare as was formerly supposed and that multiple polypi of the colon are frequent. There is a close association between ulcerative colitis and polyposis. Ulcerative colitis occurs in children as well as in adults. In the majority of cases malignant change sooner or later occurs. A condition of infantilism may result from polyposis of the colon in early life. Polyposis of the colon cannot be diagnosed unless the polypi are seen and felt. Satisfactory X ray and proctoscopic examination are possible only in a proportion of cases. When multiple polypi of a very diffuse nature are present in the colon, there are a characteristic infiltration and a want of flexibility in the walls which are unlike that seen in any other condition. When handling the colon the observer will notice that increase in weight is very striking. The prognosis is bad unless colectomy is performed. Ileostomy, caecostomy or appendicostomy, followed by irrigation, has been successful in a few cases.

Spontaneous Dislocation of the Hip.

R. Watson Jones (*The British Journal of Surgery*, July, 1926) points out that spontaneous dislocation of the hip occurs oftener and has a more serious crippling result than the traumatic variety. The dislocations are divided into four large types: Dislocation from muscular paralyses, from acute arthritis, from chronic arthritis and subluxation from chronic arthritis. Three factors combine to maintain the stability of joints; the shape of the ends of the bones, the resistance of the intraarticular and extraarticular ligaments and the action of the surrounding muscles. But of these the most important is no doubt the muscular element. Spontaneous dislocation of the hip is due to a flexion-adduction deformity of the hip. Flexion alone or adduction alone may cause subluxation, but cannot bring about complete dislocation. Paralytic dislocation occurs usually in lower neurone lesions, when the extensors and abductors are paralysed and the flexors and adductors unopposed. It may occur in upper neurone lesions, if there is over-activity of the flexors as well as of the adductors. In infective arthritis the dislocation is due to muscle spasm of the flexors and adductors with atrophy of the extensors, aided sometimes by bone destruction. Complete dislocation rarely occurs in chronic arthritis, because there is less muscle spasm. The condition can be prevented in both paralysis and infection by the prevention of flexion-adduction deformity and by restoration of the muscular balance. Though most patients can be improved, corrective treatment as a whole is unsatisfactory, because in many cases of dislocation there is other irreparable damage.

Benign Tumours of the Breast.

John H. Gibbon (*The Atlantic Medical Journal*, May, 1926) discusses benign tumours of the breast and emphasizes the difficulty experienced by clinicians in differentiating from cancer any of the benign growths except the hard adenomata found in the breasts of young women. He claims that breasts are sometimes unnecessarily sacrificed on account of this difficulty. In an analysis of two hundred breast operations for lesions other than inflammatory conditions he finds that the non-malignant condi-

tions requiring surgical treatment were almost as common as the malignant. When excision is necessary for a diagnosis, considerable surrounding breast tissue should be taken out with the tumour. The clinical history combined with the gross section of the tumour is often more reliable than examination of the frozen section and the decision rests with the operating surgeon. In the author's opinion cysts are very common and rarely undergo malignant degeneration. They usually occur between the ages of thirty and forty-five. In *nulliparæ* they are generally single, but may occur simultaneously in both breasts. On palpation fluctuation and circumscription are found and palpation is painful. Enlargement of the axillary lymph glands is never present unless suppuration has occurred in the cyst. Chronic cystic mastitis is not so easily diagnosed as either cancer or single cyst, because the signs are often more vague. It occurs about middle adult life, the area involved is generally the lower and outer quadrant and pain especially at the menstrual periods is generally present. Such patients should be kept under observation and be examined every two or three months. Adenomata are easily recognized, occurring in adolescence or young adult life. Indications for radical operation are the occurrence of either fixation of the skin, nodular hardness, retraction of the nipple or glandular enlargement. The best method of operation for benign tumours of the breast is the Gaillard Thomas incision round the periphery of the breast with its elevation and the excision of a certain amount of surrounding breast tissue with the tumour or cyst, the excised portion being triangular in shape with its apex at the centre of the breast. X rays and radium should never be used in the treatment of benign tumours of the breast, as they may result in stimulating degenerative changes in the tumour or cyst so treated.

Cholecyst-gastrostomy.

WALTMAN WALTERS (*Surgery, Gynecology and Obstetrics*, June, 1926) discusses the operation of cholecyst-gastrostomy. This operation allows the passage of bile from the gall bladder to the stomach when the former is distended as a result of obstruction in the distal portion of the common bile duct either from stricture or pancreatic blockage. To insure adequate function after operation the obstruction must be entirely distal to the entrance of the cystic duct into the common duct. The risk of the operation is from oozing from jaundiced tissues and this can be avoided by intravenous injections of calcium chloride. Bleeding may occur into the lumen of the anastomosed structures from the cut ends of enlarged veins in the walls of the gall bladder and this can be prevented by a hæmostatic inverting stitch of the buttonhole locking type. There is also danger from leakage in the suture line as a result of tension of the stomach when distended with fluid. This tension at the suture line of the anastomosis is prevented by attaching the portion of the stomach proximal to the anastomosis to the falciform ligament of the liver by uninterrupted sutures of catgut, keeping the pylorus to the right of the spine. A stomach tube should be passed if there is any sign of gastric retention as evidenced by hiccough, a feeling of fullness in the epigastrium or a rise in the pulse rate. Fluid is supplied by proctoclysis and hypodermoclysis. Neither fluid or food should be given by the mouth for three days.

Sympathectomy in Raynaud's Disease.

L. DAVIS AND A. B. KANAVEL (*Surgery, Gynecology and Obstetrics*, June, 1926) state that surgeons are now enthusiastic over operative procedures directed toward the sympathetic system. They discuss the use of sympathectomy in Raynaud's disease, erythromelalgia and other vascular diseases of the extremities. The peripheral blood vessels receive their sympathetic innervation in a segmental manner by way of the somatic nerves. Removal of the sympathetic innervation to an extremity in man is followed by hyperæmia and hyperthermia which gradually disappear within one or two weeks following operation. In certain vascular diseases of the extremities, characterized by paroxysmal vasomotor symptoms and the absence of pathological changes in the vessels, removal of the sympathetic innervation is followed by an improvement in symptoms. Among this group may be included Raynaud's disease and erythromelalgia. There are many physiological factors concerned in the control of the peripheral circulation and of these the vessel musculature and calibre are but a part. In the present state of knowledge of the pathology of the vasomotor neuroses it is impossible to explain completely the effects produced by removal of the sympathetic nerve supply of the extremities.

Bronchial Asthma.

E. HESSE (*Deutsche Medizinische Wochenschrift*, May 21, 1926) is not satisfied with the results obtained by himself and others following cervical sympathectomy for severe cases of bronchial asthma. He has performed the operation on seventeen patients. The worst results followed bilateral division of the sympathetic. Although the numbers are too small to allow any dogmatization, the author points out that better results followed left-sided operations than either bilateral or right-sided alone. He is now inclined to operate on the side manifesting sympathetic irritation, such as dilatation of the pupil, exophthalmos, hyperæsthesia or hyperhydrosis of the skin. Failure occurred in 60% of the series of the cases. Only 30% of patients had complete cessation of asthmatical attacks. Adding his results to those already published the combined figures reveal 45% complete failures and only 30% of cures. The author maintains that at present there is no definite sign to show when the operation is indicated nor when it is not only contraindicated, but also absolutely useless.

Ultraviolet Therapy for Phlebitis.

E. SAVINI (*Wiener Medizinische Wochenschrift*, March 27, 1926) gives details of a case of phlebitis which was rapidly cured by the use of ultraviolet rays. The patient became affected by phlebitis in the left leg after an attack of appendicitis. He was submitted to the usual methods of treatment for two months without improvement. He was given a course of eleven applications of the ultraviolet rays every other day combined with light massage. When the course had been partially completed, warm baths and dry heat were added. The œdema rapidly disappeared and the patient coould walk freely within a month of starting the treatment. Savini considers that ultraviolet therapy would be advantageous in the acute stages of phlebitis and would greatly assist in reducing the long period of inaction which these patients have to endure. Dry heat and massage would be indicated after the acute stage had been shortened by the use of the violet rays.

Tuberculosis and Surgical Treatment.

STAUB-OETIKER (*Klinische Wochenschrift*, November 19, 1925) maintains that tuberculosis suitable for treatment by surgical means is only one manifestation of a general infection. There are always other foci in the body besides the main focus. Usually these subside after an operation, especially if open air treatment be adopted. He considers that in the future the majority of patients with tuberculosis suitable for treatment by surgical means will be treated along the lines advocated by Rollier and that only in a few instances will a combination of operation and open air be required. He has never observed any good results from the administration of tuberculin in tuberculosis of bones and joints.

Successful Suture of Portal Vein.

H. HABERER (*Wiener Medizinische Wochenschrift*, November 21, 1925) relates the history of a case in which he successfully repaired a rent in the wall of the portal vein. The patient suffered from a chronic gastric ulcer which had become embedded deeply in the hepatic tissue. The separation of the ulcer was assisted by the use of the cautery and as the final adhesions were being separated venous blood escaped in large quantities. A large rent was discovered in the portal vein and was closed with fine silk. Convalescence was normal. Haberer considers that he was fortunate to avoid air embolism at the time of operation and thrombosis during convalescence.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, Adelaide Street, Brisbane, on June 4, 1926, DR. E. SANDFORD JACKSON, the President, in the chair.

Otitis Media.

DR. ERNEST CULPIN showed a patient who had suffered from *otitis media* complicated by glycosuria. The semicircular canal, the cochlea and part of the facial canal about twelve millimetres in length had been removed as sequestra. The ear had healed completely and as a result of treatment the glycosuria had disappeared. The patient had signs of complete facial paralysis which showed signs of improving.

Carcinoma of the Vocal Cord

DR. WALTER CROSSE showed a patient who had been operated on for carcinoma of the vocal cord on the right side about six months previously by laryngo-fissure. The patient was able to speak.

Intranasal Surgery.

DR. ERNEST CULPIN read a paper entitled: "Facts and Fancies, Olfactory and Otherwise" (see page 435).

A MEETING OF THE SECTION OF NEUROLOGY AND PSYCHIATRY OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on June 17, 1926, DR. CHISHOLM ROSS in the chair.

Syphilis and Insanity.

DR. S. EVAN JONES read a paper entitled: "Syphilis and Insanity" (see page 441).

Diagnosis of Cerebral Syphilis.

DR. S. MINOGUE read a paper entitled: "The Differential Diagnosis of Cerebral Syphilis" (see page 444).

DR. A. W. CAMPBELL regarded Dr. Jones's paper as useful in that it was a compilation of undeniable facts. In discussions on cerebral syphilis pathological processes accompanying the disease should always be sought before a definite diagnosis was made. He drew attention to the fact that in many cases an early syphilitic patient manifested pleocytosis in the cerebro-spinal fluid and yet many of them had no nervous symptoms. In some cases of general paralysis an increase in the lymphocytes in the ventricles of the brain occurred, but not in the cerebro-spinal fluid and *vice versa*.

He remarked that while small localized meningitic lesions were common, a real syphilitic meningitis with its attendant paralyses of every kind was rare and gumma was very uncommon. Syphilitic arteriosclerosis with thrombotic softening affecting any part of the brain was frequent. In considering the diagnosis of cerebral syphilis the pathology of the condition should always be kept in the foreground.

DR. J. A. L. WALLACE referred to two patients with manic-depressive insanity whose serum responded to the Wassermann test, but in whom there was no evidence of syphilis of the nervous system. In these circumstances he looked upon the syphilis as accidental and not responsible for the mental condition.

DR. L. BOND asked if Dr. Jones in referring to the non-luetic cases, had inferred that syphilis was the cause of the mental condition in these patients or was it accidental. Dr. Jones replied that in these cases syphilis was a secondary factor.

DR. RALPH NOBLE remarked that the Argyll Robertson pupil was frequently found in other conditions than *tabes dorsalis* and was therefore not to be looked upon as a definite indication of syphilis of the nervous system as might be inferred from Dr. Minogue's paper.

DR. W. PAGE said that he did not think it possible to differentiate between meningo-vascular syphilis and parasyphilis of the nervous system, because both types were due to vascular changes. They were not due to separate destructive processes.

DR. CHISHOLM ROSS congratulated the two readers of the papers and agreed that the diagnosis of cerebral syphilis should not be made without the presence of physical signs in addition to the mental changes.

In reply Dr. Jones said that in his series of cases syphilis was found to be more prevalent in melancholia than in any other mental condition. He referred to the condition described by Ford Robertson as syphilitic melancholia. He remarked that lead encephalopathy was to be considered in the diagnosis of cerebral syphilis.

Dr. Minogue in his reply reaffirmed his belief that general paralysis was a primary cerebritis where there was deterioration in the brain substance, whereas in pseudoparesis the degeneration was secondary to vascular changes. He did not agree that all of these conditions were primarily of vascular origin.

MEDICO-POLITICAL.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, 30-34, Elizabeth Street, Sydney, on September 16, 1926, DR. R. J. MILLARD, C.M.G., C.B.E., the President, in the chair.

The Workers' Compensation Act.

DR. RICHARD ARTHUR, M.L.A., said that he wished to bring certain facts before the members of the Branch. The first insurance act dealing with workers in New South Wales had been passed in the year 1910. It had applied only to manual workers whose maximum wages were about three pounds ten shillings a week. This act had been amended in 1916, when the income limit had been raised to three hundred and twelve pounds *per annum*. It had been amended again in 1920 and the income limit had been raised to five hundred and twenty-five pounds *per annum*. Under the provision of the most recent act the income limit was seven hundred and fifty pounds *per annum* and under this Act insurance was compulsory. Dr. Arthur said that he had made careful calculation and had concluded that at least six hundred thousand persons who were wage earners, came under the provisions of the Act, leaving about three hundred thousand outside. The latter group did not comprise people with large incomes. Many of them were on the basic wage or a little above it and were small shopkeepers and so forth. The number of persons who had incomes above seven hundred pounds a year, was very small. If an allowance of three hundred and fifty pounds *per annum* was made for various exemptions, the number of persons with taxable incomes of £400 was less than twenty thousand.

In the past persons who were injured had been treated in hospitals; if they were treated by the medical profession apart from hospitals, treatment had often been given gratuitously. The medical profession had not complained until the advent of the latest Act. For some reason or other a clause had been inserted in the last Act to the effect that every person insured should be entitled to medical and nursing services to the value of fifty pounds. This had brought about an entire change, for it had endowed these persons potentially with an amount of money which would pay for their treatment. If 10% of the six hundred thousand were to require the benefit of the Act in a year (under the old act the number was 8%) and if the sum expended averaged five pounds a head, this would represent £300,000 paid in each year for medical services. After the introduction of the Act the insurance companies had taken fright and many of them had withdrawn from this class of business, while premiums

much higher than before were fixed. There had been an outcry from the supporters of the Government who had realized that their prestige was threatened. They had clamoured that the rates should be brought down and they had been reduced to one pound.

Some time previously the Government had approached the hospitals to see if they would supply medical services to Government servants. The proposal had left out of account any recompense to the honorary medical staffs. The amount to be paid was for the upkeep of patients in hospital. With the new Act the Government had been forced into the insurance business and was competing successfully. On top of this in order to bring about the further reduction for which people were clamouring, instructions had been sent to all those insuring their workers that except in unusual circumstances all persons requiring treatment should be sent to public hospitals. The effect of this was that the clause in regard to the fifty pounds would be stultified. Payment had already been made for this amount and the premiums had been fixed as a result of actuarial calculation.

In the past the medical profession had complained of hospital abuse. Doctors had been prepared to attend the destitute and as a matter of fact had overlooked much imposition. At the present time they were being systematically exploited. It appeared that medical practitioners were being asked to give their services to hospitals in order that increased dividends or a smaller deficit should be found for the Government Insurance Office or for the private offices. If patients insured in the Government Office received free treatment, private companies would have to go out of business. Dr. Arthur said that it was necessary for the medical profession to take up a decided attitude unless they were prepared to be exploited and to treat persons in possession of fifty pounds or even of a larger amount (it was possible for the amount to be larger if two injuries occurred within three months). The position of these people was better than that of 90% of the community. The money was in the coffers of the insurance company and it was the right of the members of the medical profession to obtain a reward for their services. Dr. Arthur then read a copy of a letter which he had sent to the Honorary Secretaries of the various medical associations in the State. In this letter he had suggested that members should adopt the following course:

1. Every new patient, whether private or lodge, should be questioned to ascertain—
   (*a*) If he or she is an employee and an insured person.
   (*b*) If the injury or illness is directly or indirectly connected with his or her employment.
2. If (*a*) and (*b*) are resolved in the affirmative, patients should be asked if they have notified their employer of their injury and their intention to seek medical assistance.
3. If this notification has not been given, patient should be instructed to do so at once, either verbally or in writing.
4. They should be instructed to inform their employers (a fact which many of the employers seem ignorant of) that as they (the employers) have already paid the insurance premiums, there is no further financial liability upon them and that it is therefore a matter of indifference where the employee obtains medical attention.
5. The injured persons should be instructed that if the employers ask them to go to a public hospital, they (the employees) should reply that they are not eligible for treatment at such an institution which exists for the benefit of indigent persons and that they desire to be attended by the medical man of their choice. They can also point out that they object to be kept waiting for long periods in an out-patient department and to have any dressings or other treatment carried out by a junior doctor or probation nurse.
6. If the employer still persists that the employee should go to a public hospital his decision should be at once reported to the secretary of his or her industrial union if he or she belongs to one and he should be asked to enter a strong protest regarding the employer's attitude.
7. Opportunity should be taken to enlighten all lay members of public hospital boards of the non-eligibility of persons insured under the amended *Workers' Compensation Act*.
8. The medical staff and matrons of public hospitals should be requested that in the event of emergency cases of insured persons injured while at work or going to or from work being admitted to hospital, they should only be rendered first aid and then, if possible, discharged to their own medical attendant.
9. The officials and staff of all ambulance organizations should be informed that whenever their services are called upon at a factory workshop, building construction or private residence, the presence of the nearest available medical man should be requisitioned and the decision as to where the injured person should be treated, should rest with him.
10. Opportunity should be taken to inform all insured persons of their rights as regards medical treatment under the Act and to impress upon them the necessity of insisting on obtaining them.
11. Arrangements should be made with all the private hospitals in the district to receive insured persons at a flat maximum charge for ward treatment of, say, £4 4s. or £4 10s. per week, the cost of more expensive accommodation to be borne by insuree.
12. The pharmaceutical chemists in district should be informed that they have rights under the Act similar to those of the medical profession and they should see that they are not encroached upon.
13. Accounts for treatment should be sent to employer.

Dr. Arthur said that he thought the Council of the Branch should formulate proposals for the guidance of the profession. In all hospitals a committee of the staff should be asked to inquire into what was going on in regard to the treatment of insured persons. An attempt was being made in Sydney Hospital to find out whether patients had been injured at their work. Patients had been refused X ray examination at Sydney Hospital and had been told to go to private practitioners. He recognized that some patients had to be kept in a public hospital, but a great number could go to private hospitals. For this reason a large number of persons who had suffered from accidents could be diverted into private hospitals. He thought that the medical profession might even consider the suggestion that they should open an emergency depôt near the larger hospitals for the treatment of accident patients. In conclusion Dr. Arthur begged those present to believe that he had the interests of the profession at heart. He asked them to give the matter their serious consideration and not to allow themselves to be exploited.

Dr. Arthur moved:

> That, in view of the fact that the *Workers Compensation Act*, 1926, makes provision for medical, surgical, nursing and other services to the extent of £50 for all cases of accident and illness covered by the Act and that employers have paid premiums based on this liability, this meeting is of opinion that these cases are not except in exceptional circumstances eligible for admission as in- or out-patients at public hospitals and should be treated at private patients either in their homes or in private hospitals and that the same principle should apply to lodge patients who come under the operations of the Act.

Dr. H. F. J. Norrie seconded the motion. He realized what an enormous amount of work Dr. Arthur had put into the matter and he thought that the subject should be discussed from every point of view.

Dr. J. Colvin Storey, O.B.E., said that he wished to move an amendment. He realized that he was many years Dr. Arthur's junior and respected his opinion. Their

views were more or less one. It was really a question of what means should be adopted to attain their objective. He asked what would be the effect of Dr. Arthur's motion. He thought that it would put them in a false light in the eyes of the public. It would give the impression that they had straightway adopted a fighting attitude and that they were trying to grab all that they could. He did not think that so much money would be at the disposal of the medical profession as Dr. Arthur had suggested. He had unofficially obtained the views of some of the leaders in the insurance world and found that they were quite willing to meet the doctors. He pointed out that a small percentage of the premiums had been collected as insurance against medical expenses. It should be realized that the insurance companies had nothing to guide them. They did not know what their liabilities were. In fact no one knew. Dr. Storey thought that the members of the medical profession should meet representatives of the insurance companies in order to discuss the whole matter. He thought that the Council of the Branch might be trusted to represent the point of view of the doctors. The Council would see that they were protected and in any case it was always fair to appreciate the other man's point of view. A representative of the Government Insurance Office might be asked to attend. If the latter office were to stand aloof the Branch would have a weapon to use against the Government if this should be necessary. Dr. Storey emphasized, however, that as a profession they knew no political creed. The Government of the day was constituted authority and it was a bad thing to throw bricks at the governing body merely for the sake of throwing them.

Dr. Storey went on to say that when an intimation had been received by the authorities at the Royal Prince Alfred Hospital in regard to the admission of persons insured under the Act, a reply had been sent to the effect that such patients would be received, provided they came within the category of those entitled to admission in the ordinary course of events. Some patients would certainly continue to go to the hospitals and there were numbers whom the doctors would desire to send to hospitals. Dr. Storey pointed out that Australian hospitals were not on all fours with the voluntary hospitals in England, but he thought that some arrangement might be made on somewhat similar lines to that recently concluded in England. He also referred to the schedule of fees which had been drawn up by the Council for use in connexion with the Act. He could see nothing objectionable in it.

Dr. Storey moved his amendment:

> That all words after "on this liability" be deleted and that there be substituted: "this meeting requests the Council to meet the Accident Association in friendly conference and to endeavour to come to an arrangement equitable both to the profession and the insurance companies."

Dr. T. Farranridge seconded the amendment.

Dr. C. H. E. Lawes asked the President for his ruling as to whether the proposed amendment was really an amendment. He saw no reason why they should not do as Dr. Storey suggested, even if Dr. Arthur's proposal were carried.

Dr. R. J. Millard, C.M.G., C.B.E., the Chairman, expressed the opinion that Dr. Storey's motion might be considered as an amendment.

Dr. Stratford Sheldon said that everyone was agreed that people who were paid for in the way provided by the Act, were not eligible for hospital treatment. It went without saying if the money was found they were not eligible. There were of course some conditions which would always require hospital treatment. Patients with fractures of the thigh, of the leg or of the spine for example could not be treated otherwise than in hospital. Ordinarily, however, 95% or even 98% of patients would not come into this category.

The main reason why he thought that Dr. Arthur's motion should be carried was that the Government ought to know what was the attitude of the medical profession before they began "to monkey with the bill." The public ought to be told as well. If industry was to provide for the maintenance and keep of an injured worker and provide him with treatment, the views of the profession should be quite clearly given. It was not a Government matter. It concerned the insurance companies. They would have to regulate the premium. Industry carried the burden and the money would come from the insurance fund and not from the consolidated revenue. In regard to the advice that these patients should be sent to a Government hospital, it was found that 60% were being treated in hospitals. Probably the number was greater. It might be quite right to have the first treatment carried out in hospital, but the matter ought to end there. After that the patient could get his own doctor. In his opinion the insurance companies did not want medical practitioners to treat these persons for nothing and provision had been made for fees in the large premiums. In conclusion Dr. Sheldon referred to the experience in Western Australia on the introduction of an amendment in the Act of that State in regard to the payment of medical expenses. It had been found necessary to raise the rates by 25% and the Government had taken the whole thing over. He thought that as a profession they should make their attitude quite clear. At the same time he approved of Dr. Storey's suggestion and thought that the amendment would be better as an addendum to Dr. Arthur's motion.

Dr. R. Dick said that he had come to listen. Dr. Sheldon's reference to Western Australia, however, reminded him that he had been informed that the Western Australian Government intended to bring in a method of taxing doctors' bills. The charges had become so excessive. He thought that Dr. Arthur might have given some detail as to the proportion of people who used the hospitals. He had taken it on himself to ask the Chairman of the Royal Prince Alfred Hospital what the proportion was at that institution. He had been told that during one month 6% of indoor patients came under the Act and the percentage of those treated for casualties under the Act was 25.

Dr. B. Foulds said that he did not wish to appear to be advancing the point of view of the employees, but he thought that they should not rush into passing the motion without thinking of the feasibility of carrying it out. He wished to point out that a man injured, for example, at a construction works did not know after his first attendance at hospital whether he came under the Act or not and the employers did not want him to know. What were they to do with a man the diagnosis of whose condition was not complete. One visit was frequently not sufficient. A patient received first aid treatment for an injury and might be told to return on the following day to undergo X ray examination. He might have to come back a third time to learn the result of the examination. It had been suggested that an injured man should go to the house of the nearest practitioner. Numbers of doctors would not relish this sort of patient being admitted to their private surgeries immediately after he had met with an accident and many did not want that kind of work. In regard to the suggestion that these patients should go to private hospitals, he did not know of any private hospital which would take patients until inquiry had been made. The worker had his difficulties. Many railway men were not under the Act and had no desire to be. So far as he knew only one hospital had told patients that they came under the provisions of the *Workers' Compensation Act* and that therefore they need not call again at the hospital. This was the Sydney Hospital.

Dr. R. H. Todd said that he did not think that Dr. Storey's motion should interfere with that of Dr. Arthur. It would not be inconsistent to carry both motions. He drew attention to one point in the Act and that was that the worker had to ask the employer to furnish treatment. He mentioned one office which went so far as to require that the injured worker should produce the medical attendant's receipt for his fees before it would pay for the treatment. It might turn out to be necessary in some instances for the doctor to sue the patient and obtain judgement for his fees so that the latter would have evi-

dence on which to go to the employer or the Commissioner. Dr. Todd supported the motion, as it enunciated a principle.

Dr. R. Scot Skirving agreed that the amendment proposed by Dr. Storey was not antagonistic to Dr. Arthur's motion. The latter laid down a very important principle. He thought Dr. Arthur's motion should be carried. A great many patients coming under the provisions of the Act ought to go to hospital and he was of the opinion that no one would grumble if they continued their attendance until a diagnosis was made.

Dr. Storey asked for permission to withdraw his amendment in order that he might submit it as a separate motion.

Permission was given.

The President then put Dr. Arthur's motion which was carried with one dissentient.

Dr. Storey then moved:

> That in view of the fact that the *Workers' Compensation Act*, 1926, makes provision for medical, surgical, nursing and other services to the extent of £50 for all cases of accident and illness covered by the Act and that employers have paid premiums based on this liability, this meeting requests the Council to meet the insurers under the Act in friendly conference and to endeavour to come to an arrangement equitable both to the profession and the insurers.

The motion was seconded by Dr. T. Farranridge and carried unanimously.

Dr. R. H. Todd moved the following motion:

> That in the common form of agreement between medical officer and friendly society lodge, Clause 5, after the words "court of law," words to the following effect as may be arranged between the Council and the Friendly Societies' Association be inserted, namely, "or under circumstances entitling the member to compensation (including medical benefits) under the *Workers' Compensation Act*, 1926, or any other act or acts altering or amending the same"; so that the Clause will read:
>
> 5. The medical officer shall give medical attendance to any member . . . except where otherwise provided; provided that such illness or injury be not occasioned by . . . or by the negligent act or omission of any person in respect of whom such member is entitled to claim compensation or damages in a court of law or under circumstances entitling the member to compensation (including medical benefits) under the *Workers' Compensation Act*, 1926, or any other act or acts altering or amending the same . . . .

The motion was seconded by Dr. T. W. Lipscomb and carried unanimously.

Medical Societies.

DOWNS AND SOUTH-WESTERN MEDICAL ASSOCIATION.

The first Annual General Meeting of the recently formed Downs and South-Western Medical Association affiliated with the Queensland Branch of the British Medical Association was held in Toowoomba on August 28, 1926.

Twenty members were present and apologies were received from several others who were prevented from being present by the condition of the roads.

Dr. J. Cameron, of Ipswich, represented the Queensland Branch of the British Medical Association. He apologized for the unavoidable absence of Dr. Sandford Jackson, President of the Branch.

The election of officers resulted as follows:

President: Dr. T. P. Connolly.
Vice-Presidents: Dr. T. A. Price, Dr. J. S. Smythe.
Secretary and Treasurer: Dr. Spencer Roberts.
Committee: Dr. Aeneas McDonnell, Dr. C. B. Deane Butcher, Dr. R. I. Campbell, Dr. D. Horn, Dr. G. W. Smithwick, Dr. G. V. Hickey.

It was decided for the present to hold six formal meetings a year, four in Toowoomba and two at other centres to be decided later.

A discussion on hospital policy took place and the working of the group system, as applied by the Toowoomba General Hospital Board, was explained. It was considered that this system would be adopted by other hospital boards as they were formed and it was pointed out that according to it any person irrespective of his position could join a group. For a subscription of £1 per year in country groups and one penny in the pound income in industrial groups he received, free of further charges, full hospital benefits for himself and the members of his family under sixteen years of age. In addition he could name the member of the honorary staff under whom he wished to be admitted and the honorary had no option but to treat him and his family. It was decided that the members of the Association should consider the position and give their views at the next meeting.

Public Health.

THE CONTROL OF HYDATID DISEASE.

The Council of the Victorian Branch of the British Medical Association has received a communication from the Public Health Department of Victoria to the effect that hydatid disease has been proclaimed a notifiable disease as from July 26, 1926. This step has been taken in order that the Department may obtain more information concerning the incidence of the disease in Victoria. The death rate from hydatid disease has not diminished in the course of many years. It is hoped that compulsory notification will provide information concerning the incidence of the disease in man and will stimulate investigation into the infestation of dogs with the specific tape worm. It will further draw the attention of the local authorities to the necessity of enforcing the measures prohibiting the feeding of dogs and swine on raw offal. Medical practitioners in Victoria are asked to cooperate with the State authorities in the attempt to lessen the incidence of hydatid disease. Notifications should be sent immediately hydatid disease is diagnosed.

Obituary.

SYDNEY VERE APPLEYARD.

The engines of war have been silent now for some years as far as Australia and the British Empire are concerned. Efforts have been made to establish a peace that shall be lasting. Devastated places have been rebuilt and the countryside which erstwhile was the scene of so much unforgettable horror, is once more smiling and prosperous. A generation is fast growing up to whom the war was not a very real thing, and many have been lulled by "the passing show" into what they would indignantly deny is forgetfulness of heroic deeds. The hand of death is still busy, however, cold and ruthless, gathering one and then another to his long rest. Three weeks ago another name was added to those that are inscribed indelibly on the roll of honour. Sydney Vere Appleyard was left broken in health as a direct result of his war service and after a long and trying illness gave his life for King and Country as surely as though he had died amid the noise and turmoil of battle.

Sydney Vere Appleyard was born in London and was the son of Walter Appleyard at present living in that city. He was sent to school at Buxton College and soon gave evidence of his mental ability. He played football for his school and was fond of outdoor sports. His parents intended him to enter the Navy and with that end in view sent him to the Training Ship *Conway* to study for his entrance to that service. He discovered when

sitting for his entrance examination that by an unfortunate mistake he had left it too long and that he was just one month too old. He determined, however, not to give up the sea and entered the service of the Peninsular and Oriental Steam Navigation Company. In the service of this company he advanced to the rank of third officer. At the time of the South African war he was anxious to serve and when at length he was free and was on his way to the Cape, the war ended. After this he gave up the sea and determined to study medicine. He entered the Medical School at Saint Thomas's Hospital and in 1910 was admitted as a member to the Royal College of Surgeons of England and licentiate to the Royal College of Physicians of London. He went at once to Dublin and acted as external maternity assistant at the Coombe Hospital. He became casualty assistant at Saint Thomas's Hospital, London, in 1911 and was house surgeon at Westminster Hospital in 1911 and 1912. From this post he went as house physician to Bethlem Royal Hospital and later in 1912 became medical officer in charge of a British Red Cross Society unit in Turkey in the Balkan War. In 1913 he was Senior Medical Officer in Turkey for the British Red Cross Society. Here he did a great deal of hard work and shouldered much responsibility. Major C. H. M. Doughty-Whyte, the Director of the British Red Cross Society in Turkey, wrote in the terms of highest praise of his work and of his devotion to duty in the hardest times that were experienced in that campaign. On relinquishing the post he received a medal in recognition of his services from Queen Alexandra. At this time he became co-author with C. M. Page of two articles published in *The Lancet* in which were reviewed the medical and surgical experiences of the campaign. Perusal of these articles will show that their findings coincided in many instances with conclusions which were later reached in the Great War.

It was then that Appleyard turned to Australia. He came to Sydney and started practice in Crow's Nest. He was not to have much opportunity, however, of carrying on practice for long. War broke out on August 4, 1914, and he enlisted almost immediately. His commission in the Australian Army Medical Corps bears the date August 18, 1914. The path of duty lay clearly in front of him and he followed it. He was not sent overseas at once, but served for a while in Australia. When he finally reached the scene of activities, he was attached to the Fourth Field Ambulance. He was not content until he was right in the thick of the fighting with his battalion. It was in the second "stunt" at Polygon Wood that his work attracted most attention. It was here that he received the Distinguished Service Order "for conspicuous gallantry and devotion to duty." According to the official report in *The London Gazette*:

> He established a forward dressing station immediately in rear of the front line during an attack and attended continuously to the wounded, frequently going out and dressing cases in the open under heavy shell fire. His dressing station was hit by a shell and though he was badly shaken, he continued his work with great determination and devotion to duty. His fearlessness was an inspiration to all and was the means of saving many lives.

At this time he had attained the rank of Major. He had a severe attack of trench fever and this laid the foundation of the illness from which he subsequently died. He left the line in October, 1918. His condition caused his medical advisors some concern and he was seen by the late Clifford Allbutt. Allbutt wrote to him under the date October 15, 1918, and told him that he regarded trench fever as being in all probability the cause of his illness. He was also advised that he should not in future engage in practice of too active a nature.

After return to Australia he took up practice in Glebe and tried to go gently. He was not to do so, for influenza began to rage, doctors were smitten with the complaint and the populace had to be treated. Appleyard could not sit still while work was waiting to be done. This did his health no good. Finally he was compelled to relinquish practice. He did some work at the Repatriation Department until his failing health made him give up altogether. He bore his long illness with wonderful patience till he died on August 28, 1926, of uræmia.

Sydney Vere Appleyard was a man of boundless enthusiasm. He was quiet and unobtrusive, but knew how to strive for and attain an objective. What he did, he did with all his heart. His sense of humour was keen and must have been a great asset to him. To his wife the sympathy of the medical profession and of his former comrades in the Australian Imperial Force is wholeheartedly given.

JOSEPH AHEARNE.

We regret to announce the death of Dr. Joseph Ahearne, which occurred at Townsville, Queensland, on September 21, 1926.

Congress Notes.

THE AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

It is suggested that many Australian members of the Australasian Medical Congress (British Medical Association), Dunedin, 1927, will wish to see something of New Zealand before returning. The Executive Committee have made arrangements with the Government Tourist Bureau for an officer to be in attendance at the offices of the Congress. This officer will be prepared to advise members concerning the various trips that can be made. He will also issue tickets to all parts of New Zealand and reserve accommodation for any of the journeys. Members are reminded that the New Zealand Government has consented to issue tickets for travel in first class compartments at second class fares on the production of the certificates signed by the Honorary General Secretary.

Section II.—Surgery.

President: Basil Kilvington, M.D., M.S.

Vice-Presidents: Professor F. P. Sandes, Dr. F. A. Hadley, M.B.E., Dr. A. M. Cudmore, Dr. E. Sandford Jackson, Dr. H. W. Sweetnam, Dr. H. T. D. Acland, C.M.G., C.B.E.

Honorary Secretary: Dr. R. A. H. Fulton, 2, Pitt Street, Dunedin.

Programme.

Friday, February 4, 1927.

Morning.—Combined meeting with the Sections of Medicine, of Pathology and Bacteriology, of Preventive Medicine and of Radiology: "Goitre."

Afternoon.—"The Surgical Aspect of Goitre," to be opened by Dr. Basil Kilvington.

"The Basal Metabolic Rate in Relation to the Surgery of Goitre," to be opened by Dr. H. C. Trumble.

Monday, February 7, 1927.

Morning.—"The Use and Abuse of Gastro-Enterostomy," to be opened by Mr. H. B. Devine.

"Perforation in Ulcer of the Stomach and Duodenum," to be opened by Dr. St. John W. Dansey and Dr. H. S. Newland, C.B.E., D.S.O.

Afternoon.—"The Surgery of Bladder Tumours," to be opened by Dr. R. Gordon Craig.

"Prostatectomy," to be opened by Dr. S. Harry Harris.

Tuesday, February 8, 1927.

Morning.—"The Treatment of Raynaud's Disease and Allied Conditions," to be opened by Dr. N. D. Royle.

"Splenectomy," to be opened by Dr. T. L. Lambert.

Afternoon.—Combined meeting with the Sections of Pathology and Bacteriology and of Preventive Medicine.
"The Diagnosis of Hydatid Disease."
Discussion on the surgical aspects of hydatid disease.

Wednesday, February 9, 1927.

Morning.—Combined meeting with the Sections of Medicine, of Neurology and of Orthopædics.
"Spastic Paraplegia."
Combined meeting of all Sections.
"The Present Position of Cancer."
Afternoon.—Combined meeting with the Sections of Pathology and Bacteriology and of Radiology.
"Inflammation and Tumours of Bone." Speakers: Professor F. P. Sandes and Dr. H. R. Sear.

FISHING AROUND DUNEDIN.[1]

These few notes have been written in order that those medical men who intend to be present at the Australasian Medical Congress in Dunedin next year, may if they wish make preparations for indulging in the best of all sport while they are in New Zealand. The following is merely a sketch of what is available within a day's travel from Dunedin. Though good fishing is not to be had in the immediate vicinity of the city, the very best and the most varied sport can be obtained either north, south or west.

In South Canterbury there is excellent fly fishing with either Timaru or Temuka as a centre with first-class hotel accommodation at either place; arrangements could be made for fishing huts to be at the disposal of visitors.

The Temuka River is a delightful fly stream; in the upper reaches the fish are not large, but they are very numerous. Just before this river enters the Opihi, one of the finest fly streams in New Zealand, it deepens into a series of pools which carry heavy brown trout, five and six pounders being frequently taken. Two well known Australians, Sir Rupert Clarke and his brother, pay an annual visit to Temuka and make their headquarters at the Crown Hotel, where any Australian visitor would be made welcome.

The Opihi, like the Temuka, runs on a bed of moderately fine gravel and is one long series of nice ripples and pools, the available good water extending some fifteen miles. This river has had a series of lean years until 1924 and 1925, when it seems to have come into its own again. Camping huts are distributed along its banks and arrangements could be made with local residents so that a delightful outdoor holiday could be spent.

A few miles north of Temuka and also served by the express trains from Christchurch to Dunedin is Winchester. Here are two typical English fly streams, the Waihi and the Orari, flowing through well cultivated country with their banks sheltered by willows throughout the greater part of their course. From Winchester too the great Rangitata River can be fished at its mouth. Here, as at the mouth of the Waitaki further south, the quinnat salmon run from January to April and though the run is a somewhat variable occurrence, the sport that can be obtained in good seasons, will amply repay those who like heavy fishing of this type. Fish of immense size have been landed at different times.

The Waitaki, which is also a large snow fed river, is half way between Timaru and Oamaru and it offers the same variety of fishing. Huts are numerous at both localities.

South of Dunedin a great variety of sport can be obtained. The Pomahaka, some ninety miles distant, can be fished from many centres and accommodation could be arranged either at boarding houses, or private residences near the river. In its lower reaches the Pomahaka is an excellent fly stream though it differs widely from the South Canterbury streams. It is a peaty coloured river and runs over a rocky bottom for the greater part, so that it presents cascades and broken water ending in long glides or in reaches of still water. A certain amount of ingenuity is required to fish in the best water in some of the broken reaches and if the river is high or discoloured, it is often somewhat dangerous to leave the banks.

From Clinton on the main south railway from Dunedin to Invercargill two other smaller fly streams can be reached, the Waiwera and the Waipahi, the latter a tributary of the Pomahaka.

Southland is rich in good rivers. The Mataura which runs through Gore, can be fished for twenty or thirty miles, but is perhaps best at Garston on the railway to Kingston and Lake Wakatipu. Here it is a most delightful, quietly running river between willow clad banks. No better fly stream could be found anywhere and brown trout from one to four pounds in weight are the rule. The surroundings are ideal for camping.

Lower down the railway at Lumsden the Oreti is available. Really good accommodation is procurable at the Elbow Hotel and the river can be reached at many desirable spots by hired car. The river bed is much wider and more straggling than the Mataura, but really good bags of fish up to seven pounds have been taken from the Oreti.

From Lumsden the service cars leave for Lakes Te Anau and Manapouri. These lakes are drained by the Waiau, one of the most powerful rivers in New Zealand. It carries probably the largest trout in the South Island. Atlantic salmon have recently been caught in the tributaries of Lake Te Anau and it is practically certain that they will have found their way into the Waiau. The river is difficult of access except near its mouth, which can be reached from Invercargill. Here very large brown trout are caught at night time with either natural or artificial minnow. Atlantic salmon have also been caught here. Several boats are available on the eastern bank and are usually placed at the disposal of anglers. Fish caught at the Waiau mouth are fresh sea run, having a beautiful silvery green sheen when taken fresh from the water.

Excellent sport with rainbow trout can be obtained at Lakes Wanaka and Hawea. The scenic attractions of these lakes are sufficient reason for a visit apart from the fishing and the accommodation at the Wanaka Hotel is good. These localities can be reached in a day by motor service from Dunedin or by train, steamer and car *viâ* Lake Wakatipu and Queenstown. Splendid rainbow fishing is obtained in the rivers feeding the lakes, the minnow being the best bait, though fly fishing is often possible in the evenings.

A very good publication, "Angling in New Zealand," by F. Carr Rollett, can be obtained from Messrs. Whitcombe and Tombs. This will give anglers information of other parts of the colony in addition to those referred to in these notes.

It will be a great convenience if those visitors who intend to indulge in some fishing, will let the Honorary General Secretary of the Congress or the writer of these notes know their wishes a few months before the date of the Conference. Assistance can then be extended to them either in the arrangements of tours and accommodation or in the provision of the necessary information.

[1] This article has been contributed by Dr. E. H. Williams, of Dunedin, at the request of the Executive Committee of the Second Session of the Australasian Medical Congress (British Medical Association), Dunedin, 1927.

Correspondence.

STING RAY INJURIES.

Sir: I am herewith enclosing notes of three patients attacked by the sting ray last summer. I would like to invite suggestions for treatment and also obtain information respecting the exact cause of symptoms.

Number 1 whilst bathing in shallow water felt a sharp stab in the region of heel. About fifteen minutes after he experienced intense pain up the back of the leg. This eased off in about an hour. When seen an hour and a half

after the original pain, he was normal in every way and showed a small jagged tear where he felt the prick. This caused him no further trouble and except for applying iodine locally no treatment was given.

Number 2 gave a similar history, but when seen a quarter of an hour after the first prick had an agonizing pain in the whole leg and thigh of a spasmodic nature. His pulse and temperature were normal, but he had a very ashen colour. He was given an injection of morphine (one-quarter grain) and was much easier soon after. The spot where the prick was felt showed a small tear which was painted with iodine and it healed without any further trouble or sign of infection.

Number 3 was similar to the others, except that he seemed in a condition of shock, very ashen in colour with general weakness and pulse rate one hundred. He was given an injection of morphine (one-quarter grain), strychnine (one-twentieth grain), atropine (one two-hundredth grain) and was able to walk home in half an hour quite normal in every way.

In Case Number 2 the offender was caught and shown to me and the similar symptoms in the other two cases suggest the same cause.

The sting ray caught was of the grey variety about the size of the palm of a hand with a stiff tail about three inches long made of rigid bone with a small barb near the end which accounted for the jagged appearance of the wound. I do not know why the pain should be so intense and spasmodic, unless there is some electrical stimulus associated. The treatment with morphine was entirely symptomatic and I could not say if it materially lessened the time the pain lasted, as Case Number 1 with no treatment cleared up in an hour and a half.

Hoping this will call forth suggestions.

Yours, etc.,

John Burgess, M.B., B.S. (Melbourne).

Cowes, Phillip Island, Victoria,
July 18, 1926.

A CHAIR OF PREVENTIVE MEDICINE.

Sir: At the congresses of the Health Association of Australasia at Brisbane, 1921, of the British Medical Association, Melbourne, 1923, and of the Association for the Advancement of Science, Adelaide, 1924, resolutions urging the creation of chairs of preventive medicine in the medical schools of our universities were carried unanimously.

At these congresses it was pointed out that in medical schools in the United States, Canada and more recently in South Africa the teaching of public health is being brought to an equal status with surgery, medicine and midwifery by the creation of professorial chairs of preventive medicine.

Knowing Sir James Barrett as such a doughty champion of the principles of preventive medicine and a foremost publicist in Australia of the cult that "prevention is better than cure," I appeal to him to reconsider his attitude in promulgating the idea that money could be more profitably employed in the various medical schools than in securing the endowment by the State of chairs of preventive medicine.

I would remind him that the introductory sentence: "The first duty of medicine is not to cure disease, but to prevent it," in "An Outline of the Practice of Preventive Medicine," issued by the authority he quotes, Sir George Newman, on his appointment as Chief Medical Officer of the recently created Ministry of Health, England, reechoed the first sentence of "R.A.M.C. Training," issued by the War Office, that "The Army Medical Corps is maintained firstly with a view to the prevention of disease and secondly, for the care and treatment of the sick and wounded."

If there is one idea which Sir George Newman has stressed, it surely is the need for recasting the medical curriculum to achieve this positive constructive aim with its approach to health, harmony and ease, to check at its source the negative—disease and discord.

The principles underlying preventive medicine, if this ideal be the objective, must be made the inspirational leaven of the whole training of the future medical practitioner.

In spite of all the talk of the new birth of medicine and the recent preaching that the primary duty of medicine is the prevention of disease, so firm rooted is the conception of the medicine man that to the public even his name savours of physic.

As long ago as 1850 Shattuck in his report to the Massachusetts Sanitary Commission recommended the teaching of preventive medicine as an integral portion of the medical curriculum.

Preventive medicine deals not only with the prevention of communicable diseases, but has become almost octopic in its grasp in that it includes not only the study of means for the prevention of all incipient disease which by early recognition and treatment will prevent further damage, but above all the study of the promotion of health or that state of well-being in which all the functions of body and mind are carried on without impairment of vigour.

Sir David Bruce in his Presidential Address to the British Association at Toronto declared: "Medicine in the future must change its strategy, and instead of awaiting the attack, assume the offensive. It must no longer be said the man was so sick that he had to send for the doctor. The medical practitioner of the future must frequently examine the man while he is apparently well, in order to detect any incipient departure from the normal and to teach and urge modes of living conformable to the laws of personal health, and the public authorities must see that the man's environment is in accordance with scientific teaching."

Until the medical student realizes that his future function as a practitioner is to prevent as well as to treat disease, a step towards which teaching would be the raising of the status of public health in the curriculum, he will continue to look upon the subject merely as one of minor importance.

The consummation devoutly to be wished of even a Professor of Preventive Medicine becoming the Dean of the Medical Faculty, may, however, be achieved by the New Zealand and Australian Federal and State Governments, by votes from the Treasury, showing that "the first duty of a statesman is the care of the public health," is more than a mere oleaginous platitude.

Yours, etc.,

J. S. Purdy,
Metropolitan Medical Officer of Health.

Sydney,
September 6, 1926.

Naval and Military.

APPOINTMENTS.

The undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Numbers 61, 63 and 67 of July 1, 8 and 15, 1926.

Permanent Naval Forces of the Commonwealth (Sea Going Forces).

To be Surgeon Lieutenant-Commander.—Surgeon Lieutenant Robert Martin, M.B., Ch.M., 28th June, 1926.

Australian Military Forces.

First Military District.

Australian Army Medical Corps.

Lieutenant P. N. Macgregor is transferred to the Australian Army Medical Corps Reserve, and to be Honorary Captain, 1st July, 1926; the appointment of Walter Mario Butler to be Lieutenant (provisionally) is terminated, 30th June, 1926. *To be Captain (provisionally).*—Walter Mario Butler, 1st July, 1926.

Captain (provisionally) W. J. F. Douglas is transferred from the Australian Army Medical Corps, 2nd Military District, 17th June, 1926; Captain G. A. C. Douglas is transferred to the Unattached List, 17th June, 1926.

Australian Army Medical Corps Reserve.

Captain R. W. Cilento is transferred from the Australian Army Medical Corps Reserve, 4th Military District, 20th June, 1926.

Lieutenant P. W. Hopkins, M.C., is transferred from the General List of the Reserve of Officers, 3rd Military District, and to be Honorary Captain, 18th June, 1926; Lieutenant L. H. Foote is transferred from the General List of the Reserve of Officers and to be Honorary Captain, 1st July, 1926.

Second Military District.

Australian Army Medical Corps.

Majors K. S. Parker, M.C., and L. Cowlishaw are brought on the authorized establishment of Majors, 1st January, 1926, and 13th May, 1926, respectively.

Captain C. S. Renwick is appointed from the Australian Army Medical Corps Reserve, 23rd June, 1926. *To be Captain*—Eric Payten Dark, M.C., 15th June, 1926. *To be Captain* (provisionally)—Bruce Arran Sinclair, 1st July, 1926; Captain (provisionally) W. J. F. Douglas is transferred to the Australian Army Medical Corps, 1st Military District, 17th June, 1926.

Australian Army Medical Corps Reserve.

To be Honorary Captains—Lieutenant S. G. Whitfeld and Honorary Lieutenant M. B. Fraser, 1st January, 1926, and 1st July, 1926, respectively; Honorary Major R. F. Reading is retired under the provisions of Australian Military Regulation 152 (1), 30th June, 1926.

To be Honorary Captain—John Patrick Cawley Madden, 10th June, 1926.

Third Military District.

Australian Army Medical Corps.

The provisional appointment of Captain W. L. Armstrong is confirmed.

Australian Army Medical Corps Reserve.

To be Honorary Captain—Lieutenant K. D. Fairley, 1st January, 1926; Major F. D. Jermyn, V.D., is placed upon the Retired List with the honorary rank of Lieutenant-Colonel, and with permission to wear the prescribed uniform, 14th June, 1926; Honorary Major T. Murphy is retired under the provisions of Australian Military Regulation 152 (1), 8th June, 1926.

Fourth Military District.

Australian Army Medical Corps.

To be Captain (provisionally)—John Ellison Porter, M.M., 1st July, 1926; Captain J. K. D. Mackenzie is transferred (provisionally) from the Melbourne University Rifles, 4th Division, and to be supernumerary to the establishment pending absorption, 2nd July, 1926; Major L. O. Betts, O.B.E., is seconded whilst attending a post graduate course abroad, 1st July, 1926.

Australian Army Medical Corps Reserve.

Captain R. W. Cilento is transferred to the Australian Army Medical Corps Reserve, 1st Military District, 20th June, 1926.

Award of the Colonial Auxiliary Forces' Officers' Decoration.

Australian Army Medical Corps.—Colonel S. R. Burston, C.B.E., D.S.O.

Fifth Military District.

Australian Army Medical Corps.

Captain L. E. Le Souef is seconded whilst attending a post graduate course abroad, 26th June, 1926.

Australian Army Medical Corps Reserve.

To be Honorary Captains—Honorary Lieutenants F. H. Vincent and J. J. Hough, 1st July, 1926.

Post-Graduate Work.

NOVEMBER COURSE IN MELBOURNE.

THE Honorary Secretaries of the Melbourne Permanent Committee for Post-Graduate Work announce that the usual course will be held in Melbourne for a fortnight commencing on November 8, 1926. The inaugural address will be delivered by Sir George A. Syme. The arrangements are nearly complete. A syllabus will be published in this journal in an early issue.

THE MEDICAL BENEVOLENT ASSOCIATION OF NEW SOUTH WALES.

THE Council of the Medical Benevolent Association of New South Wales has received many inquiries concerning the distribution of its funds. The following information is evidence of the need for a considerable fund to enable the Association to assist the relatives of deceased medical practitioners who are left in straitened circumstances. Two ladies, aged seventy-five and seventy-six years respectively are in receipt of a weekly allowance of twenty-five shillings each. The sum of twenty-five pounds is paid each quarter to the mother of two children left penniless by the sudden death of their father. The aggregate amount paid to these three beneficiaries is therefore £230 a year. The total income of the Benevolent Fund of New South Wales during the latter years of its existence was approximately two hundred pounds a year. It is hoped that the members of the medical profession in New South Wales will provide the new Association with sufficient monetary aid to enable it to respond to all genuine claims in an adequate manner.

DIPLOMA IN TROPICAL MEDICINE.

THE following medical practitioners have passed the prescribed examination in the first week of August, 1926, for the diploma in tropical medicine at the Australian Institute of Tropical Medicine: Dr. W. L. Calov (with distinction), Dr. R. L. Bellamy and Dr. C. M. Deland. The course of instruction extends over three months.

Proceedings of the Australian Medical Boards.

VICTORIA.

THE undermentioned have been registered under the provisions of Part I. of the *Medical Act*, 1915, as duly qualified medical practitioners:

Barker, Thomas Louis, M.B., B.S., 1923 (Univ. Melbourne), Winchelsea.

Buttsworth, Bert Wilfred, M.B., B.S., 1926 (Univ. Melbourne), 26, Austral Avenue, Brunswick.

Callagher, Hugh Charles, M.B., B.S., 1926 (Univ. Melbourne), Melbourne Hospital.

Giblin, Thomas, M.B., B.S., 1926 (Univ. Melbourne), 142, Macquarie Street, Hobart.

Joynt, Wilbur Francis, M.B., B.S., 1926 (Univ. Melbourne), 26, The Strand, Williamstown.

Murray, Alan Thomas, M.B., B.S., 1926 (Univ. Melbourne), 3, Wimmera Place, St. Kilda.

Stewart, Hector Hamilton, M.B., B.S., 1926 (Univ. Melbourne), 12, Hornby Street, Windsor.

Travers, Thomas a'Beckett, M.B., B.S., 1926 (Univ. Melbourne), 25, Wallace Avenue, Toorak.

Additional qualifications registered:

Scantlebury, Vera, M.D., 1924 (Univ. Melbourne).

O'Donnell, Kenneth Francis, M.D., 1926 (Univ. Melbourne).

QUEENSLAND.

THE undermentioned have been registered under the provisions of *The Medical Act* of 1925, as duly qualified medical practitioners:

Barrett, Denis Francis, M.B., Ch.M., 1925 (Univ. Sydney), Blair Athol.
Goldman, Joseph, M.B., Ch.M., 1924 (Univ. Sydney), Lowood.
Lawes, Charles Henry Wickham, M.B., Ch.M., 1923 (Univ. Sydney), Gympie.
O'Collins, Joseph Bernard, M.B., B.S., 1926 (Univ. Melbourne), Toowoomba.
Sherwood, Norman Leslie, M.B., Ch.M., 1925 (Univ. Sydney), Brisbane.

Restorations to Register:

Cook, Sydney Leicester, M.B., 1908 (Univ. Sydney), Toowoomba.
Lane, Muriel Shirley, M.B., Ch.M., 1921 (Univ. Sydney), Brisbane.

Medical Appointments.

Dr. Edna L. Nelson (B.M.A.) has been appointed a Medical Officer of Health under the provisions of *The Health Act*, 1911-19, Western Australia.

* * * * *

Dr. R. D. McKellar Hall (B.M.A.) has been appointed Medical Officer of Health to the Claremont Road Board, Western Australia.

* * * * *

Dr. Ashcroft Derrinal Speed (B.M.A.) has been appointed Public Vaccinator at Kooloonong, Victoria.

* * * * *

Dr. William Henry Fitchett (B.M.A.) has been appointed Public Vaccinator at Elsternwick, Victoria.

* * * * *

Dr. Oby Willans Rawson (B.M.A.) has been appointed Public Vaccinator at Euroa, Victoria.

* * * * *

Dr. W. L. Carrington (B.M.A.) has been appointed Medical Superintendent to the Alfred Hospital, Melbourne.

* * * * *

Dr. J. E. Porter (B.M.A.) has been appointed Deputy Quarantine Officer, Port Adelaide, South Australia.

* * * * *

Dr. Rustal Henry Hemsted (B.M.A.) has been appointed Acting Resident Magistrate and Acting Magistrate of the Local Court at Port Hedland, also Acting Chairman of the Port Hedland Court of Session, South Australia.

* * * * *

Dr. John Coffey (B.M.A.) has been appointed Deputy Commissioner, Department of Public Health, Brisbane.

* * * * *

Dr. Norman McLeod (B.M.A.) has been appointed Acting Medical Officer at the Wallaroo Hospital, South Australia.

* * * * *

Dr. Frederick Steele Scott (B.M.A.) has been appointed a Member of the Nurses' Registration Board, South Australia.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xxii.

BURREN JUNCTION MEDICAL FUND, NEW SOUTH WALES: Medical Officer.
CHILDREN'S HOSPITAL, CARLTON, VICTORIA: Medical Vacancies.
ISISFORD DISTRICT HOSPITAL, QUEENSLAND: Medical Officer.
ROYAL AUSTRALIAN AIR FORCE: Medical Officer.
VICTORIAN EYE AND EAR HOSPITAL, MELBOURNE: Three Resident Surgeons.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Ceduna, Wudinna (Central Eyre's Peninsula), Murat Bay and other West Coast of South Australia Districts.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

OCT. 2.—New South Wales Branch, B.M.A.: Delegates of Local Associations meet Council (Second Day).
OCT. 5.—Tasmanian Branch, B.M.A.: Council.
OCT. 5.—New South Wales Branch, B.M.A.: Council (Quarterly).
OCT. 6.—Victorian Branch, B.M.A.: Branch.
OCT. 6.—Western Australian Branch, B.M.A.: Council.
OCT. 7.—South Australian Branch, B.M.A.: Council.
OCT. 7.—Section of Orthopædics, New South Wales Branch, B.M.A.
OCT. 8.—Queensland Branch, B.M.A.: Council.
OCT. 12.—Tasmanian Branch, B.M.A.: Branch.
OCT. 12.—Victorian Branch, B.M.A.: Council.
OCT. 12.—New South Wales Branch, B.M.A.: Ethics Committee.
OCT. 12.—Section of Medicine, New South Wales Branch, B.M.A.
OCT. 13.—Northern Suburbs Medical Association, New South Wales.
OCT. 14.—New South Wales Branch, B.M.A.: Clinical Meeting.
OCT. 18.—New South Wales Branch, B.M.A.: Organization and Science Committee.
OCT. 19.—Tasmanian Branch, B.M.A.: Council.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the Journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance.